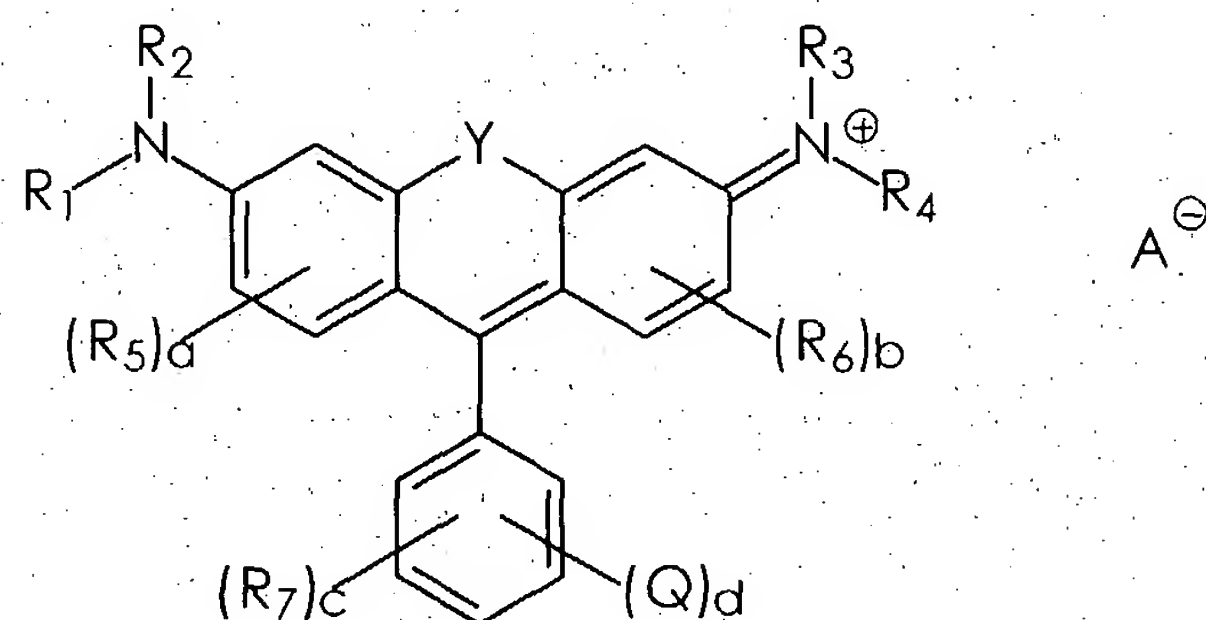
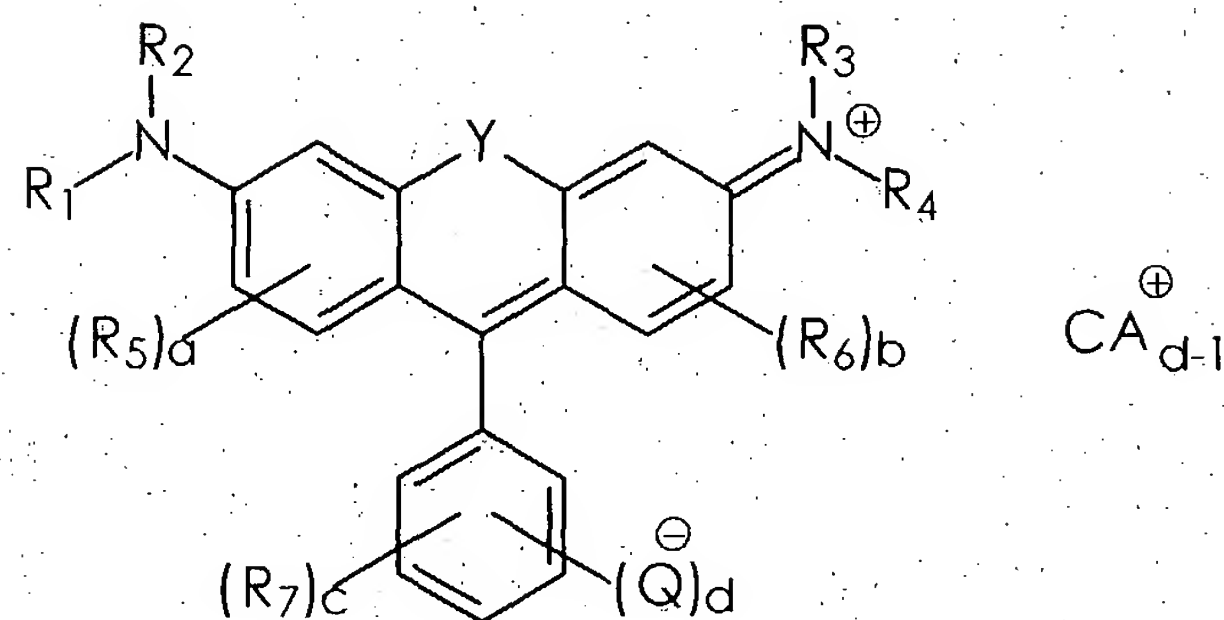


WHAT IS CLAIMED IS:

1. A phase change ink composition comprising a phase change ink carrier and a colorant compound of the formula

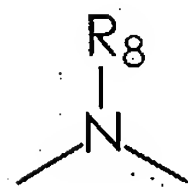
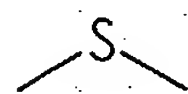
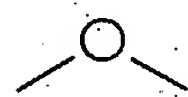


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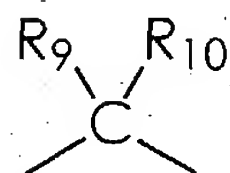


wherein R_1 , R_2 , R_3 , and R_4 each, independently of the others, is (i) a hydrogen atom, (ii) an alkyl group, (iii) an aryl group, (iv) an arylalkyl group, or (v) an alkylaryl group, wherein R_1 and R_2 can be joined together to form a ring, wherein R_3 and R_4 can be joined together to form a ring, and wherein R_1 , R_2 , R_3 , and R_4 can each be joined to a phenyl ring in the central structure, a and b each, independently of the others, is an integer which is 0, 1, 2, or 3, c is an integer which is 0, 1, 2, 3, or 4, each R_5 , R_6 , and R_7 , independently of the others, is (i) an alkyl

group, (ii) an aryl group, (iii) an arylalkyl group, (iv) an alkylaryl group, (v) a halogen atom, (vi) an ester group, (vii) an amide group, (viii) a sulfone group, (ix) an amine group or ammonium group, (x) a nitrile group, (xi) a nitro group, (xii) a hydroxy group, (xiii) a cyano group, (xiv) a pyridine or pyridinium group, (xv) an ether group, (xvi) an aldehyde group, (xvii) a ketone group, (xviii) a carbonyl group, (xix) a thiocarbonyl group, (xx) a sulfate group, (xxi) a sulfide group, (xxii) a sulfoxide group, (xxiii) a phosphine or phosphonium group, (xxiv) a phosphate group, (xxv) a mercapto group, (xxvi) a nitroso group, (xxvii) an acyl group, (xxviii) an acid anhydride group, (xxix) an azide group, (xxx) an azo group, (xxxi) a cyanato group, (xxxii) an isocyanato group, (xxxiii) a thiocyanato group, (xxxiv) an isothiocyanato group, (xxxv) a urethane group, or (xxxvi) a urea group, wherein R_5 , R_6 , and R_7 can each be joined to a phenyl ring in the central structure,

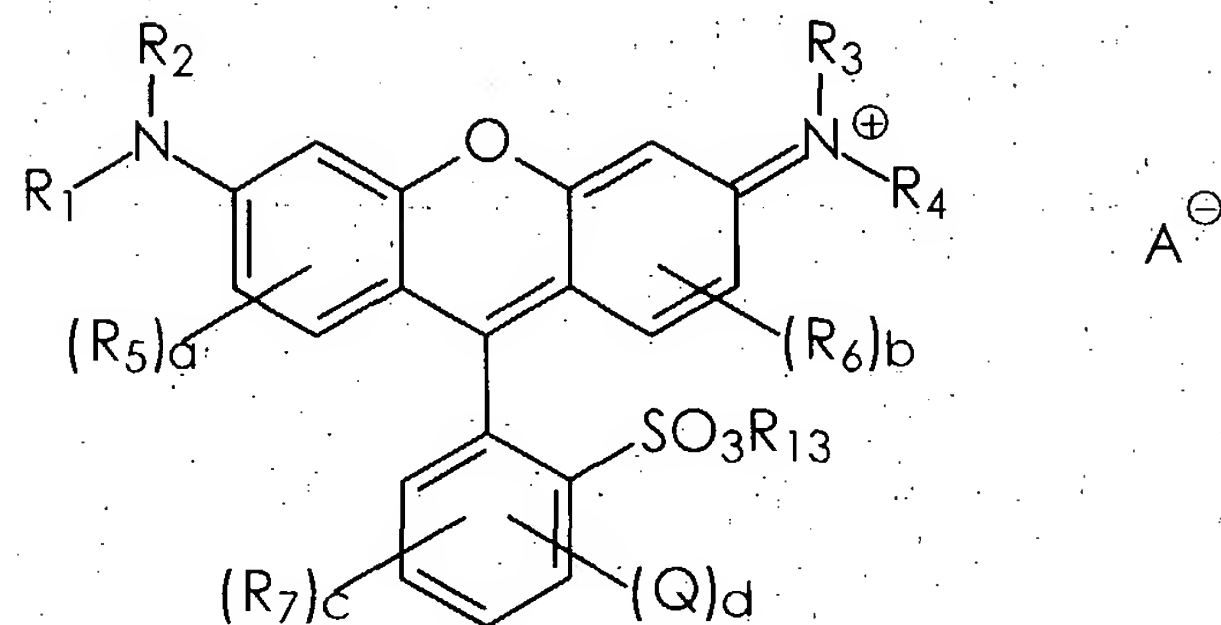
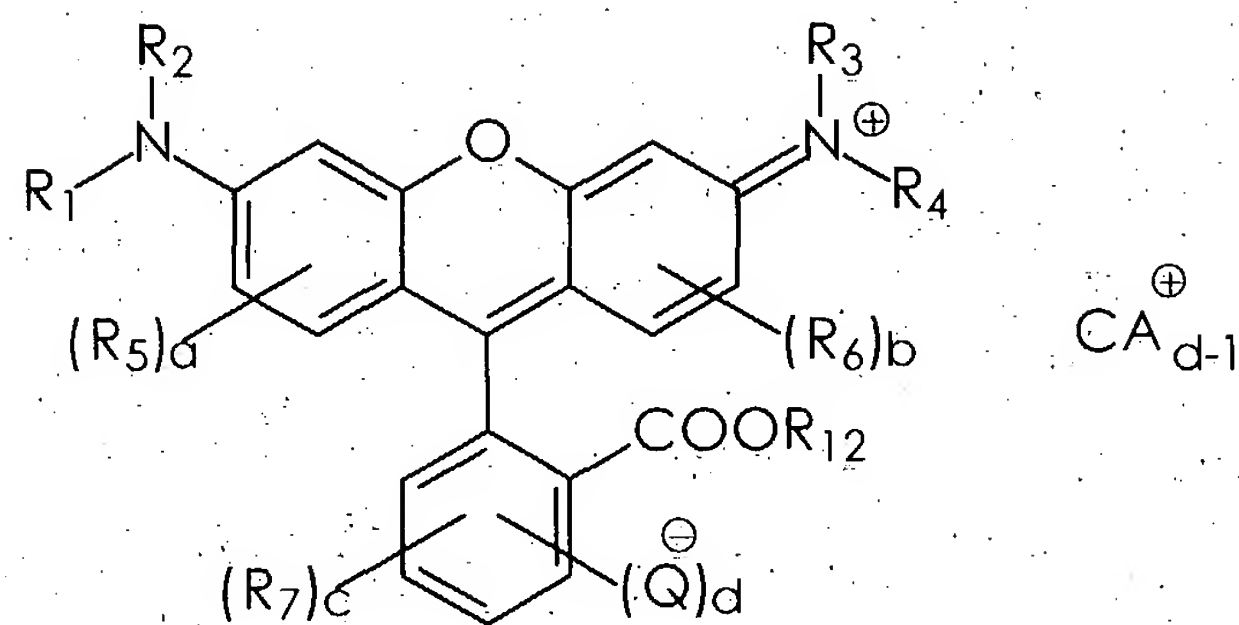
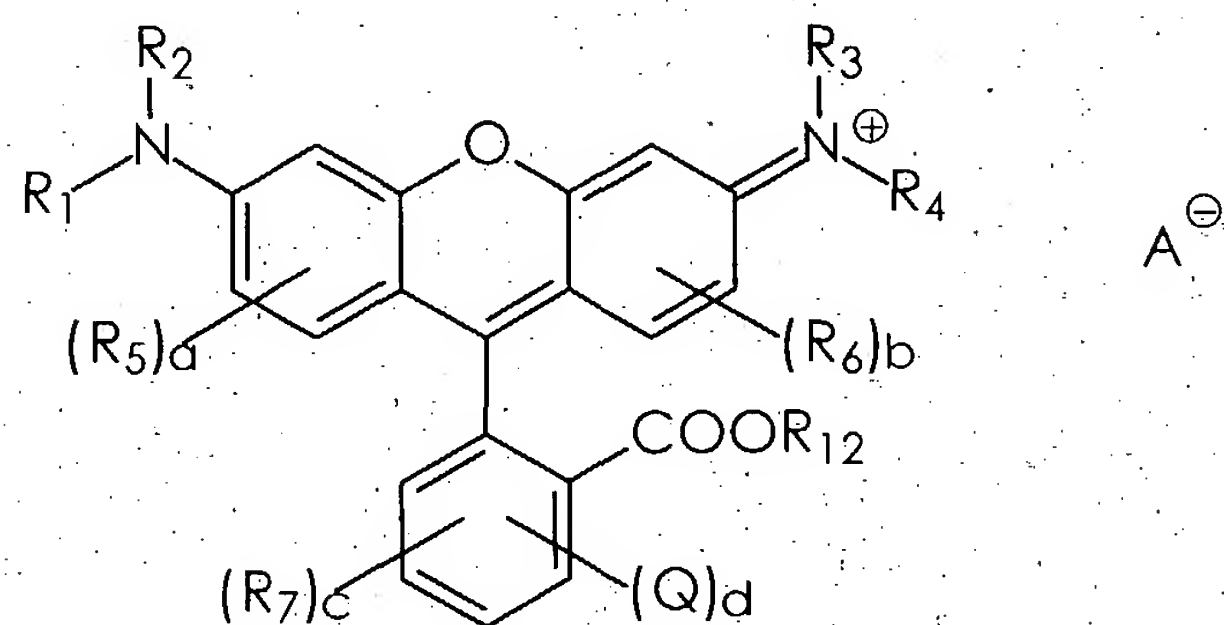


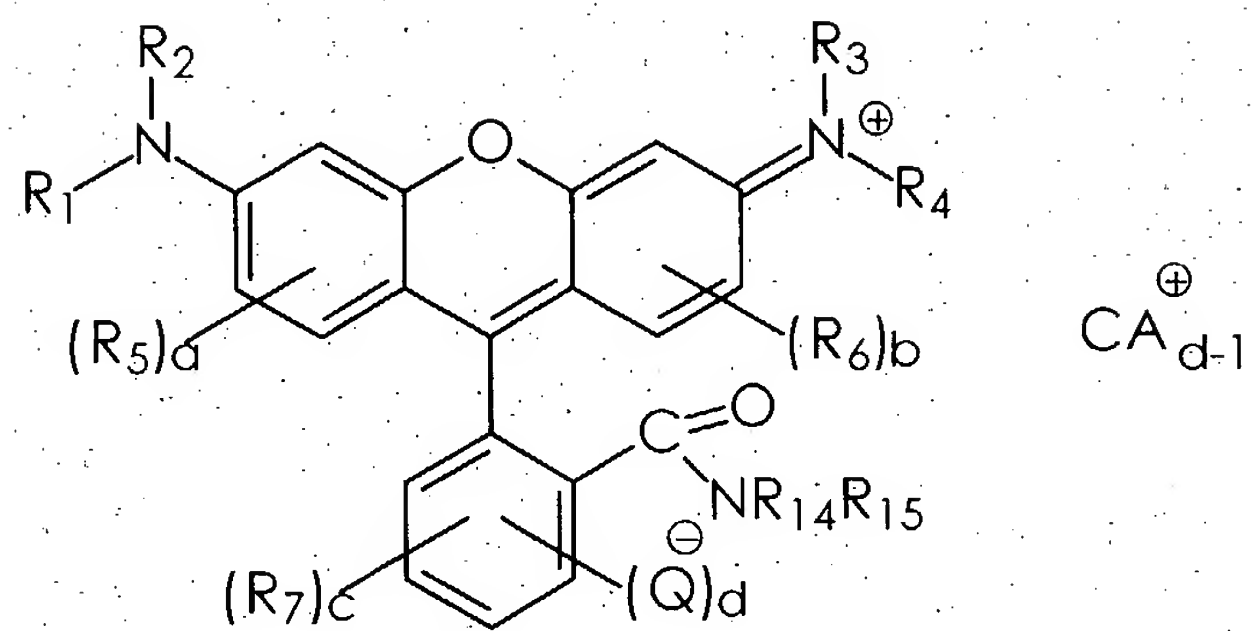
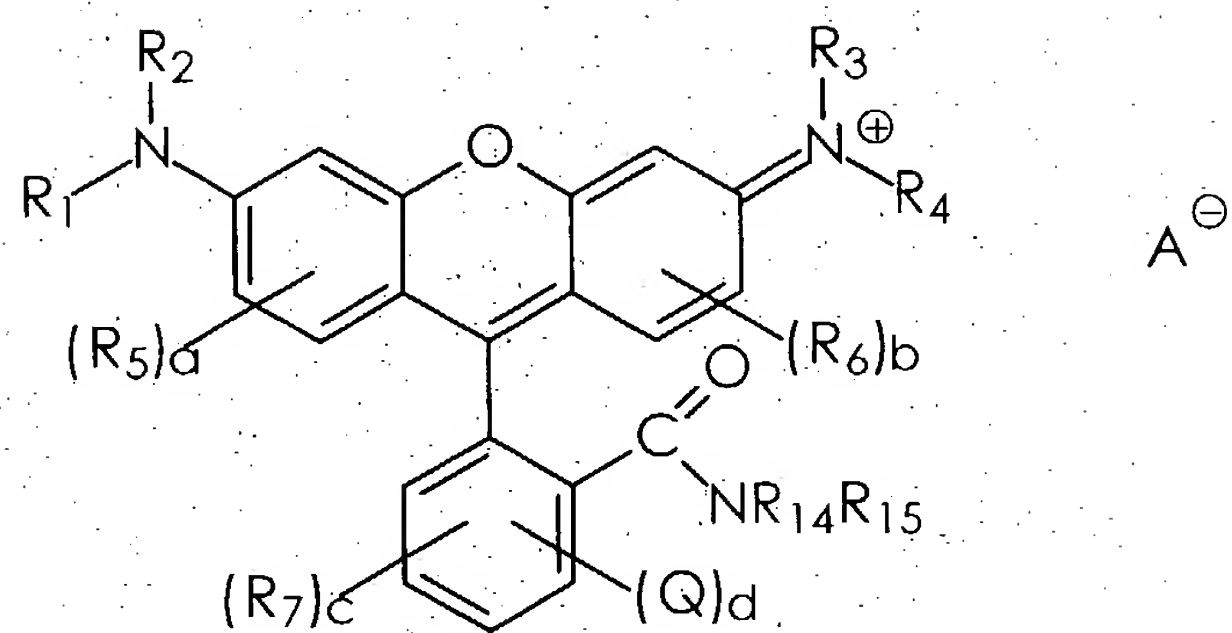
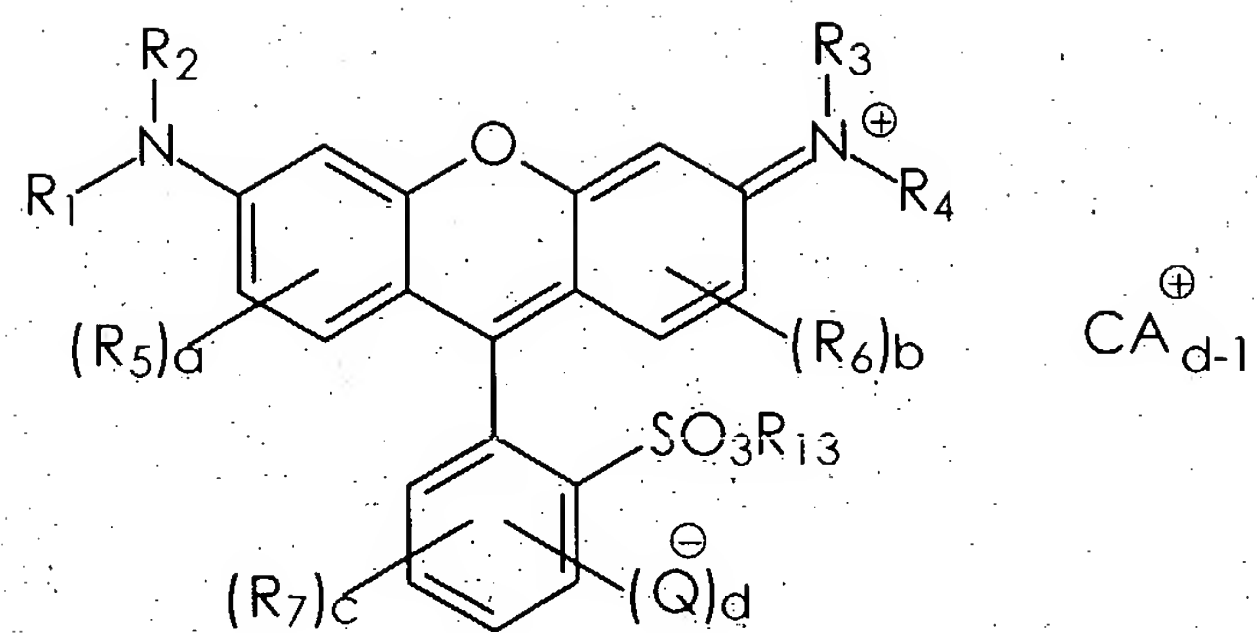
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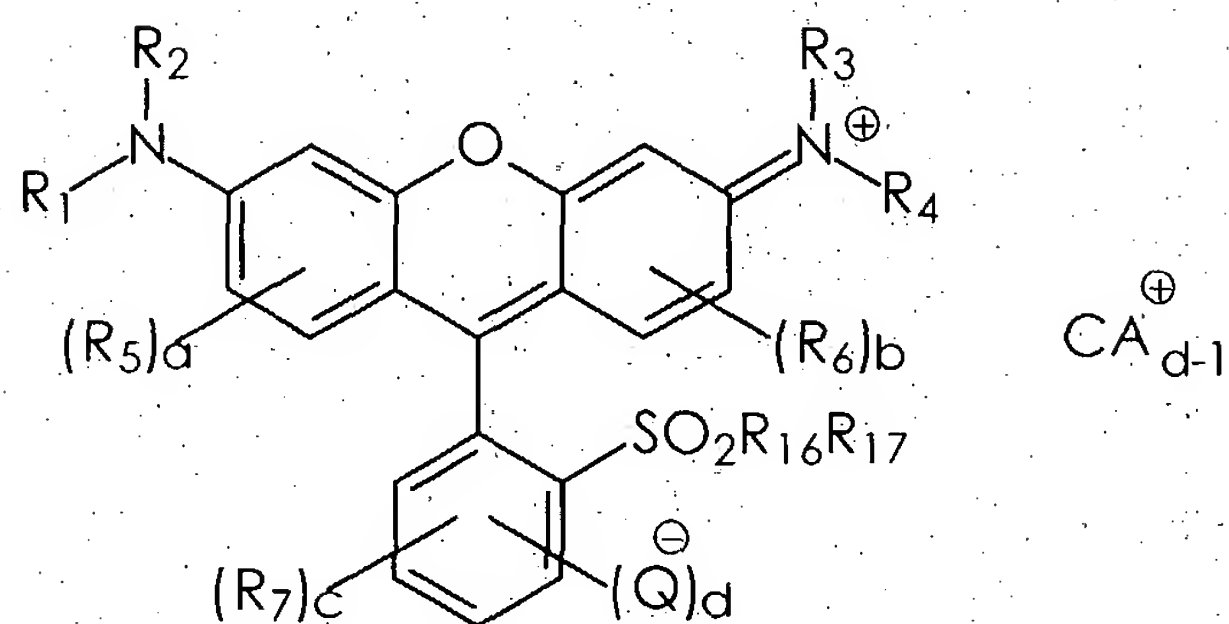
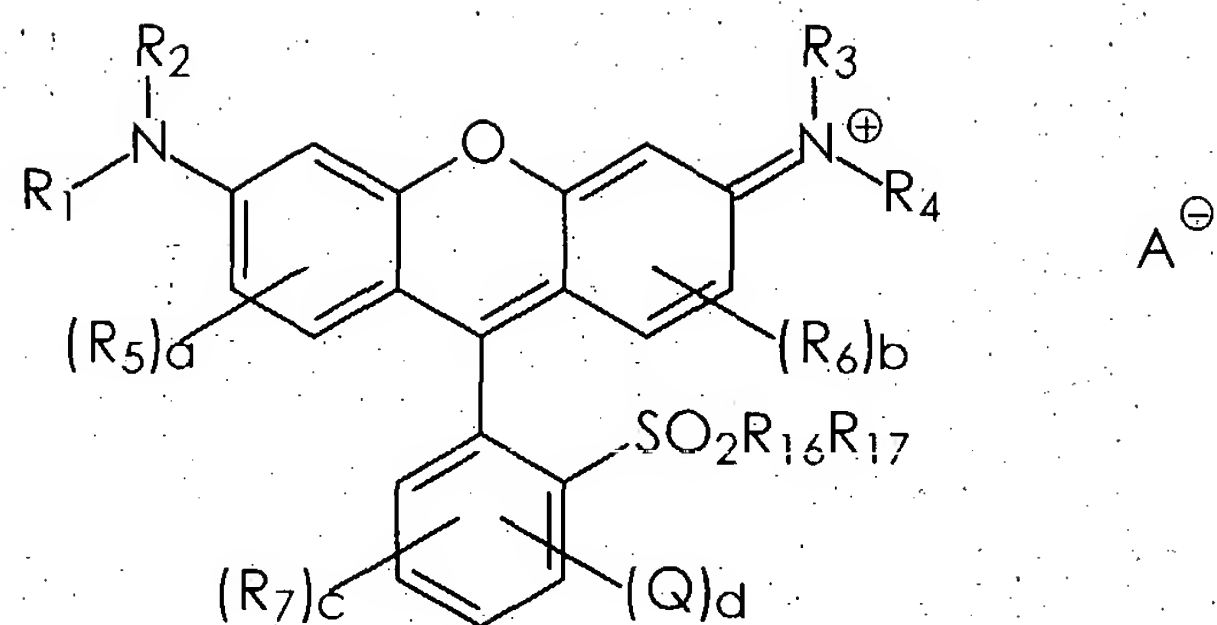


R_8 , R_9 , and R_{10} each, independently of the others, is (i) a hydrogen atom, (ii) an alkyl group, (iii) an aryl group, (iv) an arylalkyl group, or (v) an alkylaryl group, provided that the number of carbon atoms in

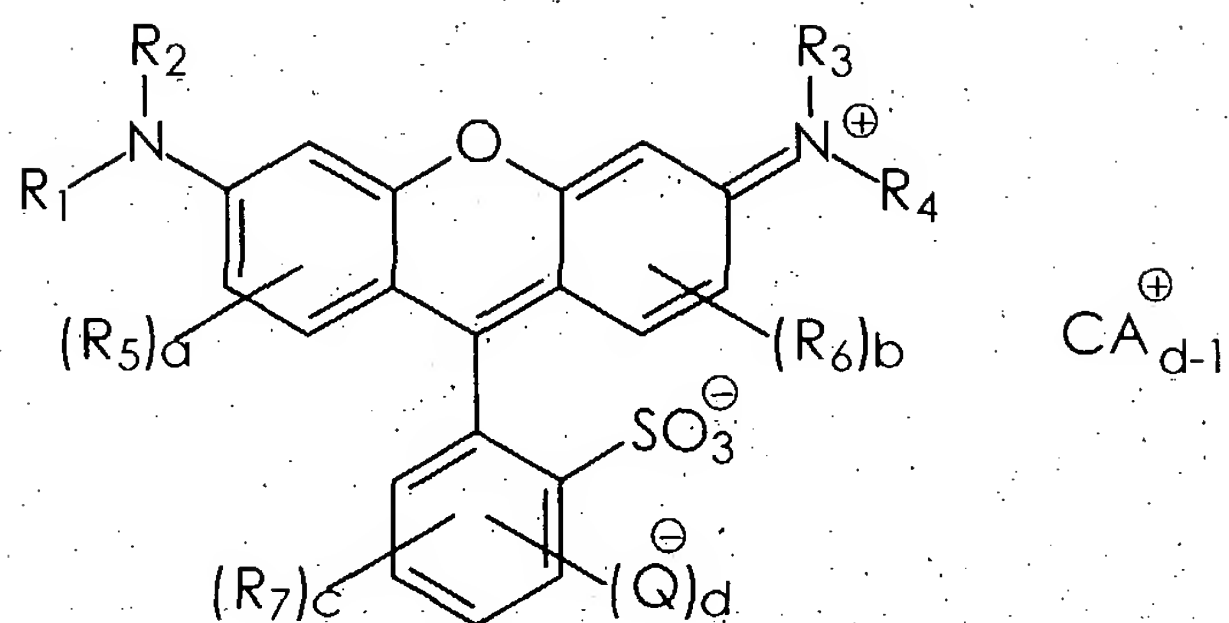
$R_1+R_2+R_3+R_4+R_5+R_6+R_7+R_8+R_9+R_{10}$ is at least about 16, Q is a COOH group or a SO₃H group, Q⁻ is a COO⁻ group or a SO₃⁻ group, d is an integer which is 1, 2, 3, 4, or 5, A is an anion, and CA is either a hydrogen atom or a cation associated with all but one of the Q⁻ groups, provided that when the colorant compound is of the formula







or



wherein R_{12} , R_{13} , R_{14} , R_{15} , R_{16} , and R_{17} each, independently of the other, is (i) an alkyl group, (ii) an aryl group, (iii) an arylalkyl group, or (iv) an alkylaryl group, (I) either (a) c is an integer which is 0, 1, 2, or 3, or (b) d is an integer which is 1, 2, 3, or 4, and (II) either (a) three of R_1 , R_2 , R_3 ,

and R_4 are hydrogen atoms; (b) only one of R_1 , R_2 , R_3 , and R_4 is a hydrogen atom; (c) R_1 and R_2 are both hydrogen atoms; (d) R_3 and R_4 are both hydrogen atoms; or (e) R_1 and R_3 are both hydrogen atoms and R_2 and R_4 are each, independently of the other, either alkyl groups or arylalkyl groups.

2. A phase change ink composition according to claim 1 wherein the phase change ink carrier comprises a monoamide, a tetra-amide, or a mixture thereof.

3. A phase change ink composition according to claim 1 wherein the phase change ink carrier comprises (a) stearyl stearamide, (b) a dimer acid based tetra-amide that is the reaction product of dimer acid, ethylene diamine, and stearic acid, or (c) mixtures thereof.

4. A phase change ink composition according to claim 1 wherein the phase change ink carrier comprises (a) stearyl stearamide, (b) a dimer acid based tetra-amide that is the reaction product of dimer acid, ethylene diamine, and a carboxylic acid having at least about 36 carbon atoms, or (c) mixtures thereof.

5. A phase change ink composition according to claim 4 wherein the carboxylic acid has at least about 40 carbon atoms, and wherein the carboxylic acid has no more than about 200 carbon atoms.

6. A phase change ink composition according to claim 1 wherein the phase change ink carrier comprises an isocyanate-derived material.

7. A phase change ink composition according to claim 1 wherein the phase change ink carrier comprises a urethane isocyanate-derived material, a urea isocyanate-derived material, a urethane/urea isocyanate-derived material, or mixtures thereof.

8. A phase change ink composition according to claim 1 wherein the phase change ink carrier comprises a mixture of one or more amides and one or more isocyanate-derived materials.

9. A phase change ink composition according to claim 1 wherein the phase change ink carrier comprises one or more materials selected from paraffins, microcrystalline waxes, polyethylene waxes, ester waxes, amide waxes, fatty acids, fatty alcohols, fatty amides, sulfonamide materials, tall oil rosins, rosin esters, ethylene/vinyl acetate copolymers, ethylene/acrylic acid copolymers, ethylene/vinyl acetate/acrylic acid copolymers, copolymers of acrylic acid with polyamides, ionomers, and mixtures thereof.

10. A phase change ink composition according to claim 1 wherein the phase change ink carrier is present in the ink in an amount of at least about 0.1 percent by weight of the ink and wherein the phase change ink carrier is present in the ink in an amount of no more than about 99 percent by weight of the ink.

11. A phase change ink composition according to claim 1 wherein the phase change ink carrier is present in the ink in an amount of at least about 50 percent by weight of the ink and wherein the phase change ink carrier is present in the ink in an amount of no more than about 98 percent by weight of the ink.

12. A phase change ink composition according to claim 1 wherein the phase change ink carrier is present in the ink in an amount of at least about 90 percent by weight of the ink and wherein the phase change ink carrier is present in the ink in an amount of no more than about 95 percent by weight of the ink.

13. A phase change ink composition according to claim 1 wherein the ink further contains an antioxidant.

14. A phase change ink composition according to claim 13 wherein the antioxidant is present in the ink in an amount of at least about 0.01 percent by weight of the ink, and wherein the antioxidant is present in the ink in an amount of no more than about 20 percent by weight of the ink.

15. A phase change ink composition according to claim 1 wherein the ink further contains a viscosity modifier.

16. A phase change ink composition according to claim 15 wherein the viscosity modifier is an aliphatic ketone.

17. A phase change ink composition according to claim 15 wherein the viscosity modifier is present in the ink in an amount of at least about 0.1 percent by weight of the ink and wherein the viscosity modifier is present in the ink in an amount of no more than about 99 percent by weight of the ink.

18. A phase change ink composition according to claim 1 wherein the ink carrier comprises (a) a polyethylene wax, (b) a stearyl stearamide wax, (c) a dimer acid based tetra-amide that is the reaction product of dimer acid, ethylene diamine, and a carboxylic acid having at least about 36 carbon atoms, (d) a urethane resin derived from the reaction of two equivalents of hydroabietyl alcohol and one equivalent of isophorone diisocyanate, (e) a urethane resin that is the adduct of three equivalents of stearyl isocyanate and a glycerol-based alcohol, and (f) an antioxidant.

19. A phase change ink composition according to claim 1 wherein the ink carrier comprises (a) a polyethylene wax in an amount of at least about 25 percent by weight of the ink and in an amount of no more than about 60 percent by weight of the ink, (b) a stearyl stearamide wax in an amount of at least about 8 percent by weight of the ink and in an amount of no more than about 32 percent by weight of the ink, (c) a dimer acid based tetra-amide that is the reaction product of dimer acid, ethylene diamine, and a carboxylic acid having at least about 36 carbon atoms in an amount of at least about 10 percent by weight of the ink and in an amount of no more than about 32 percent by weight of the ink, (d) a urethane resin derived from the reaction of two equivalents of hydroabietyl alcohol and one equivalent of isophorone diisocyanate in an amount of at least about 6 percent by weight of the ink and in an amount of no more than about 16 percent by weight of the ink, (e) a urethane resin that is the adduct of three equivalents of stearyl isocyanate and a glycerol-based alcohol in an amount of at least about 2 percent by weight of the ink and in an amount of no more than about 13 percent by weight of the ink, and (f) an antioxidant in an amount of at least about 0.01 percent by weight of the ink and in an amount of no more than about 1 percent by weight of the ink.

20. A phase change ink composition according to claim 1 wherein the colorant is present in the ink in an amount of at least about 0.1 percent by weight of the ink.

21. A phase change ink composition according to claim 1 wherein the colorant is present in the ink in an amount of at least about 0.5 percent by weight of the ink.

22. A phase change ink composition according to claim 1 wherein the colorant is present in the ink in an amount of at least about 1 percent by weight of the ink.

23. A phase change ink composition according to claim 1 wherein the colorant is present in the ink in an amount of no more than about 20 percent by weight of the ink.

24. A phase change ink composition according to claim 1 wherein the colorant is present in the ink in an amount of no more than about 13 percent by weight of the ink.

25. A phase change ink composition according to claim 1 wherein the colorant is present in the ink in an amount of no more than about 6 percent by weight of the ink.

26. A phase change ink composition according to claim 1 wherein the ink has a melting point of no lower than about 50°C and wherein the ink has a melting point of no higher than about 160°C.

27. A phase change ink composition according to claim 1 wherein the ink has a melting point of no lower than about 70°C and wherein the ink has a melting point of no higher than about 140°C.

28. A phase change ink composition according to claim 1 wherein the ink has a melting point of no lower than about 80°C and wherein the ink has a melting point of no higher than about 100°C.

29. A phase change ink composition according to claim 1 wherein the ink has a melt viscosity at a temperature of about 140°C of no more than about 30 centipoise.

30. A phase change ink composition according to claim 1 wherein the ink has a melt viscosity at a temperature of about 140°C of no more than about 20 centipoise.

31. A phase change ink composition according to claim 1 wherein the ink has a melt viscosity at a temperature of about 140°C of no more than about 15 centipoise.

32. A phase change ink composition according to claim 1 wherein the ink has a melt viscosity at a temperature of about 140°C of no less than about 1 centipoise.

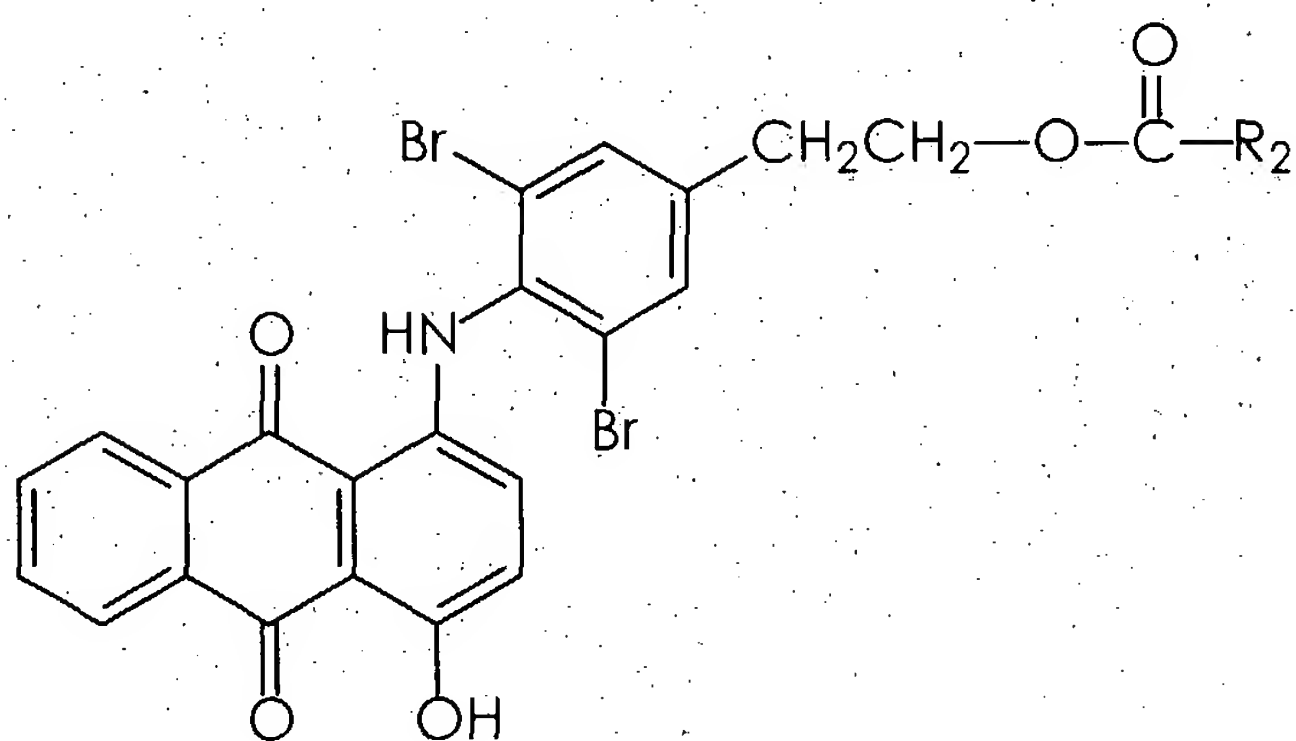
33. A phase change ink composition according to claim 1 wherein the ink has a melt viscosity at a temperature of about 140°C of no less than about 5 centipoise.

34. A phase change ink composition according to claim 1 wherein the ink has a melt viscosity at a temperature of about 140°C of no less than about 7 centipoise.

35. A phase change ink composition according to claim 1 further containing an anthraquinone colorant.

36. A phase change ink composition according to claim 35 wherein the anthraquinone colorant is Solvent Red 172.

37. A phase change ink composition according to claim 35 wherein the anthraquinone colorant is of the formula



wherein R₂ is a linear alkyl group having an average of about 50 carbon atoms.

38. A phase change ink composition according to claim 1 further containing an acid having a K_a value greater than that of the K_a of the Q and/or Q⁻ groups on the colorant.

39. A phase change ink composition according to claim 38 wherein the acid is para-toluene-sulfonic acid, dodecylbenzenesulfonic acid, hydrochloric acid, trifluoroacetic acid, methanesulfonic acid, trifluoromethyl sulfonic acid, hydrobromic acid, or a mixture thereof.

40. A phase change ink composition according to claim 1 wherein a, b, and c are each zero.

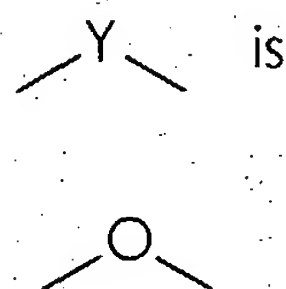
41. A phase change ink composition according to claim 1 wherein d is 1.

42. A phase change ink composition according to claim 1 wherein d is 2.

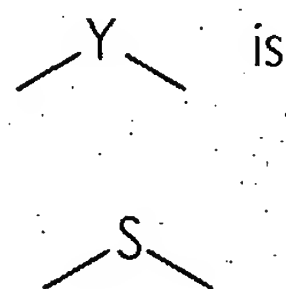
43. A phase change ink composition according to claim 1 wherein d is 1, Q is a COOH group, and Q⁻ is a COO⁻ group.

44. A phase change ink composition according to claim 1 wherein d is 1, Q is a SO₃H group, and Q⁻ is a SO₃⁻ group.

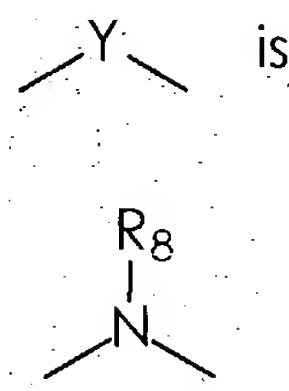
45. A phase change ink composition according to claim 1 wherein



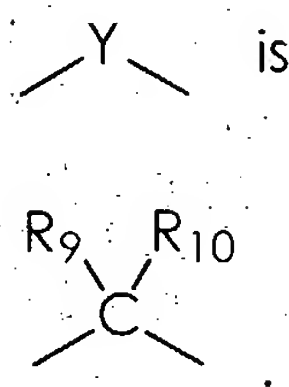
46. A phase change ink composition according to claim 1 wherein



47. A phase change ink composition according to claim 1 wherein



48. A phase change ink composition according to claim 1 wherein



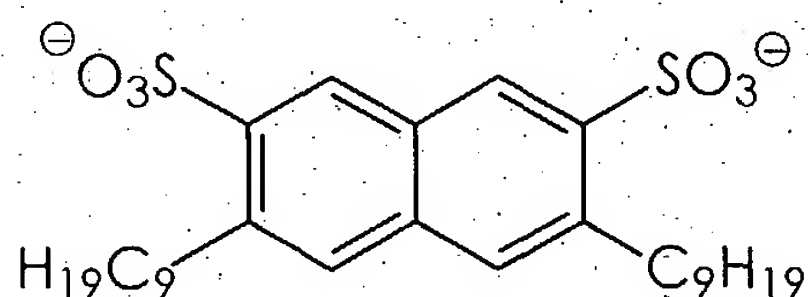
49. A phase change ink composition according to claim 1 wherein A is an organic dianion of the formula $A_1-R_{11}-A_2$ wherein A_1 and A_2 each, independently of the other, are anions and wherein R_{11} is (i) an alkylene group, (ii) an arylene group, (iii) an arylalkylene group, or (iv) an alkylarylene group.

50. A phase change ink composition according to claim 49 wherein A_1 and A_2 each, independently of the other, are selected from the group consisting of SO_3^- and COO^- .

51. A phase change ink composition according to claim 49 wherein A_1 and A_2 are each sulfonate anions.

52. A phase change ink composition according to claim 49 wherein R_{11} is an unsubstituted naphthalene disulfonate, a substituted naphthalene disulfonate, an unsubstituted benzene disulfonate, or a substituted benzene disulfonate.

53. A phase change ink composition according to claim 49 wherein the organic dianion is of the formula



54. A phase change ink composition according to claim 1 wherein at least one of R_1 , R_2 , R_3 , and R_4 is an alkyl group.

55. A phase change ink composition according to claim 54 wherein the alkyl group is a linear alkyl group.

56. A phase change ink composition according to claim 54 wherein the alkyl group is a branched alkyl group.

57. A phase change ink composition according to claim 54 wherein the alkyl group is a saturated alkyl group.

58. A phase change ink composition according to claim 54 wherein the alkyl group is an unsaturated alkyl group.

59. A phase change ink composition according to claim 54 wherein the alkyl group is a cyclic alkyl group.

60. A phase change ink composition according to claim 54 wherein the alkyl group is a substituted alkyl group.

61. A phase change ink composition according to claim 54 wherein the alkyl group is an unsubstituted alkyl group.

62. A phase change ink composition according to claim 54 wherein the alkyl group has at least about 18 carbon atoms.

63. A phase change ink composition according to claim 54 wherein at least one hetero atom selected from oxygen, nitrogen, sulfur, silicon, or phosphorus is present in the alkyl group.

64. A phase change ink composition according to claim 54 wherein no hetero atoms are present in the alkyl group.

65. A phase change ink composition according to claim 1 wherein at least one of R_1 , R_2 , R_3 , and R_4 is an aryl group.

66. A phase change ink composition according to claim 65 wherein the aryl group is a substituted aryl group.

67. A phase change ink composition according to claim 65 wherein the aryl group is an unsubstituted aryl group.

68. A phase change ink composition according to claim 65 wherein at least one hetero atom selected from oxygen, nitrogen, sulfur, silicon, or phosphorus is present in the aryl group.

69. A phase change ink composition according to claim 65 wherein no hetero atoms are present in the aryl group.

70. A phase change ink composition according to claim 1 wherein at least one of R_1 , R_2 , R_3 , and R_4 is an arylalkyl group.

71. A phase change ink composition according to claim 70 wherein the arylalkyl group is a substituted arylalkyl group.

72. A phase change ink composition according to claim 70 wherein the arylalkyl group is an unsubstituted arylalkyl group.

73. A phase change ink composition according to claim 70 wherein at least one hetero atom selected from oxygen, nitrogen, sulfur, silicon, or phosphorus is present in the arylalkyl group.

74. A phase change ink composition according to claim 70 wherein no hetero atoms are present in the arylalkyl group.

75. A phase change ink composition according to claim 1 wherein at least one of R_1 , R_2 , R_3 , and R_4 is an alkylaryl group.

76. A phase change ink composition according to claim 75 wherein the alkylaryl group is a substituted alkylaryl group.

77. A phase change ink composition according to claim 75 wherein the alkylaryl group is an unsubstituted alkylaryl group.

78. A phase change ink composition according to claim 75 wherein at least one hetero atom selected from oxygen, nitrogen, sulfur, silicon, or phosphorus is present in the alkylaryl group.

79. A phase change ink composition according to claim 75 wherein no hetero atoms are present in the alkylaryl group.

80. A phase change ink composition according to claim 1 wherein R_1 and R_2 are joined together to form a ring.

81. A phase change ink composition according to claim 1 wherein R_1 and R_2 are joined together to form a ring and wherein R_3 and R_4 are joined together to form a ring.

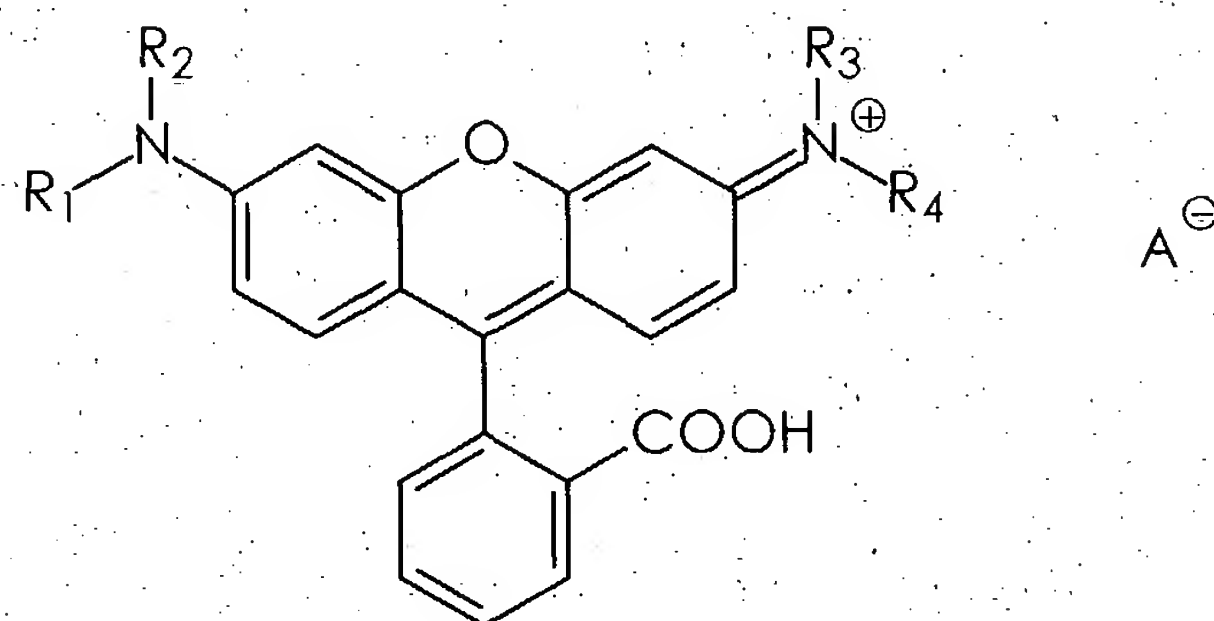
82. A phase change ink composition according to claim 1 wherein at least one of R_1 , R_2 , R_3 , and R_4 is joined to a phenyl ring in the central structure.

83. A phase change ink composition according to claim 1 wherein the number of carbon atoms in $R_1+R_2+R_3+R_4+R_5+R_6+R_7+R_8+R_9+R_{10}$ is at least about 32.

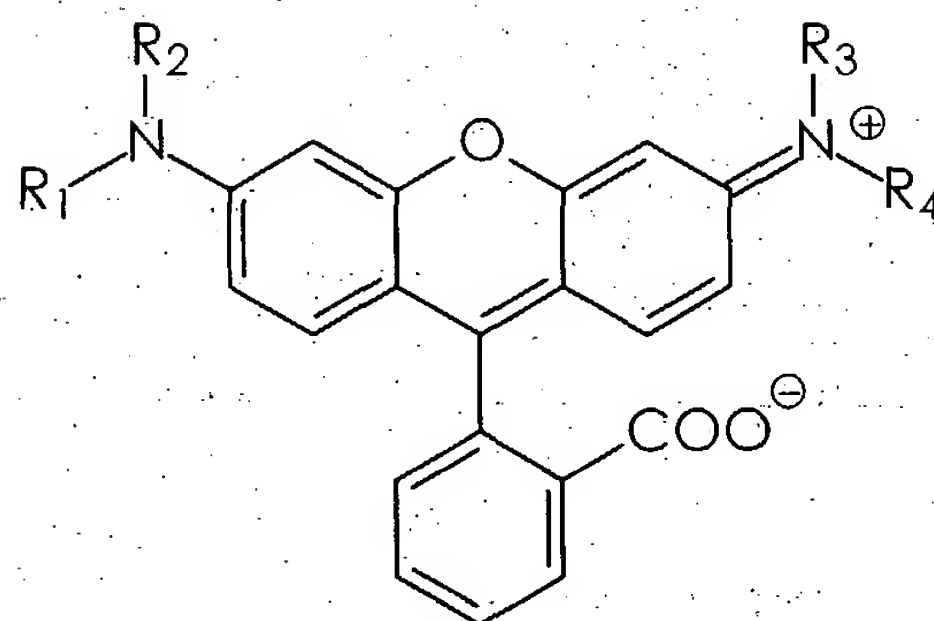
84. A phase change ink composition according to claim 1 wherein the number of carbon atoms in $R_1+R_2+R_3+R_4+R_5+R_6+R_7+R_8+R_9+R_{10}$ is at least about 48.

85. A phase change ink composition according to claim 1 wherein the number of carbon atoms in $R_1+R_2+R_3+R_4+R_5+R_6+R_7+R_8+R_9+R_{10}$ is at least about 72.

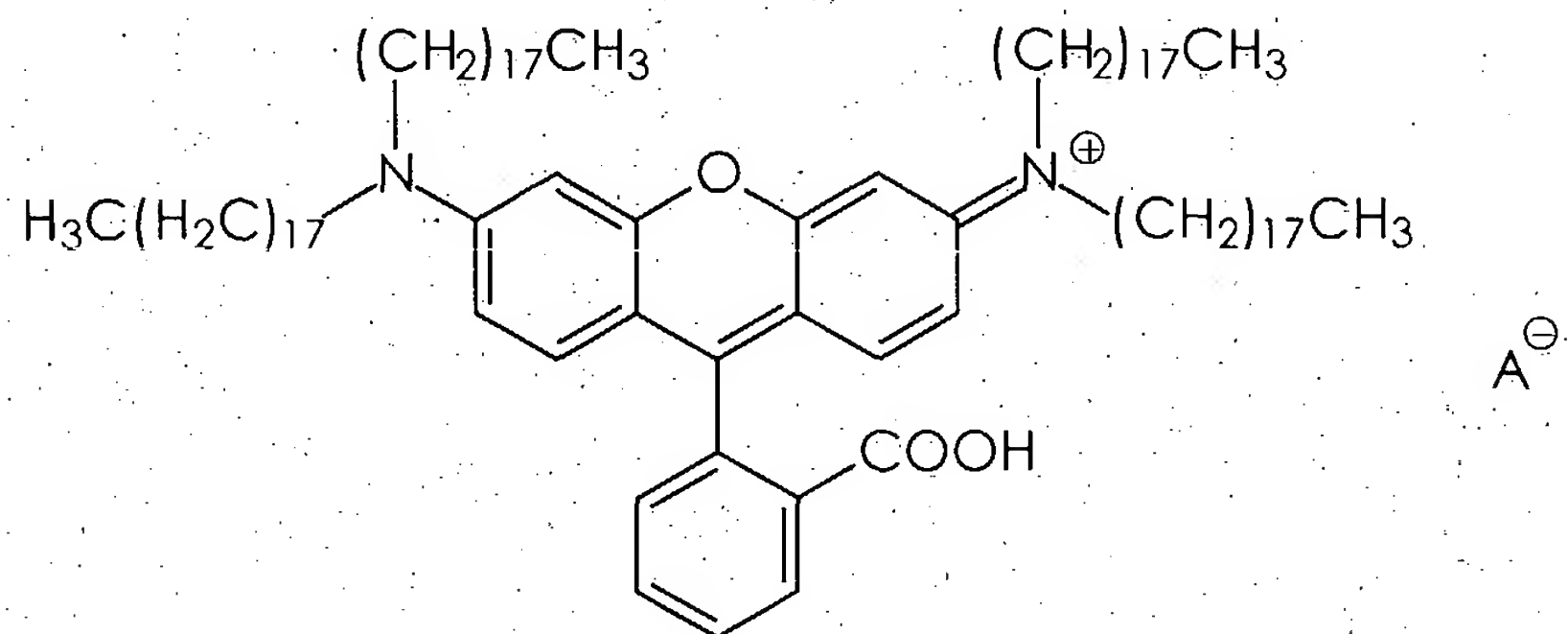
86. A phase change ink composition according to claim 1 wherein the colorant is of the formula



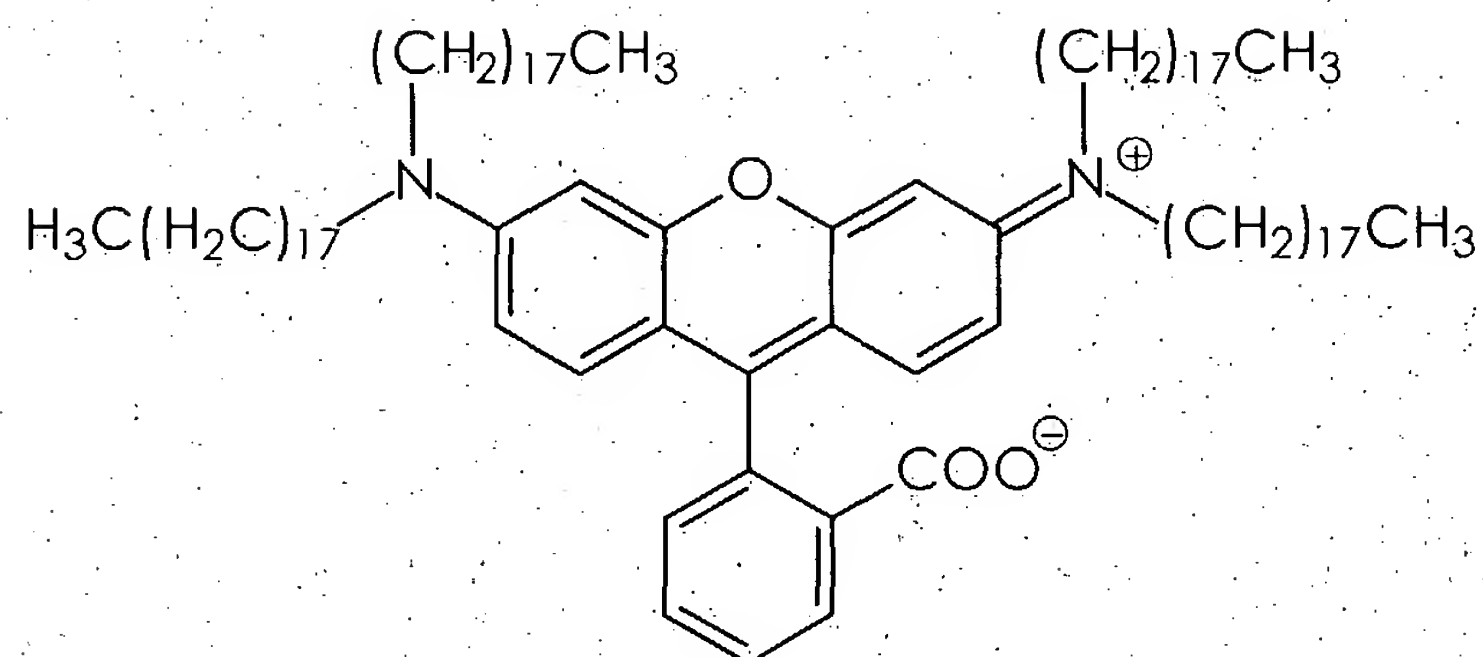
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87. A phase change ink composition according to claim 1 wherein the colorant is of the formula

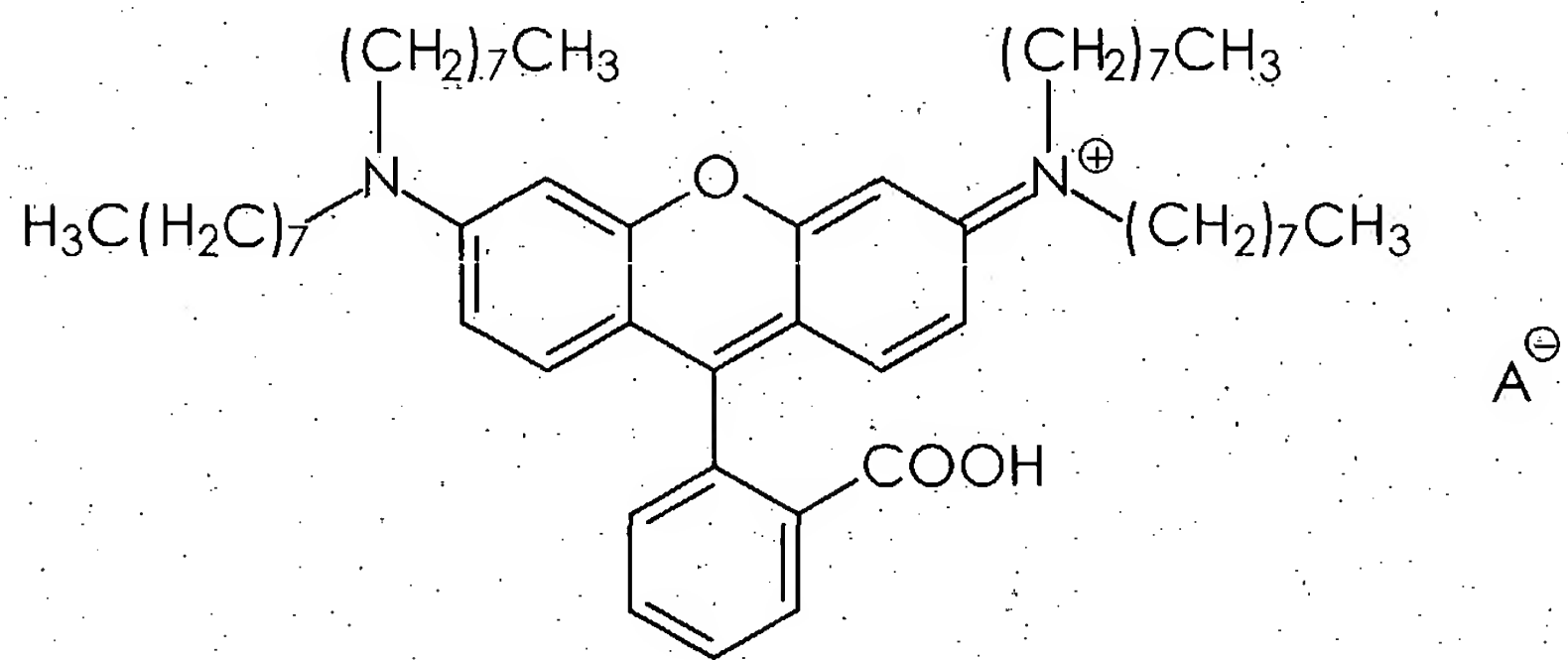


or

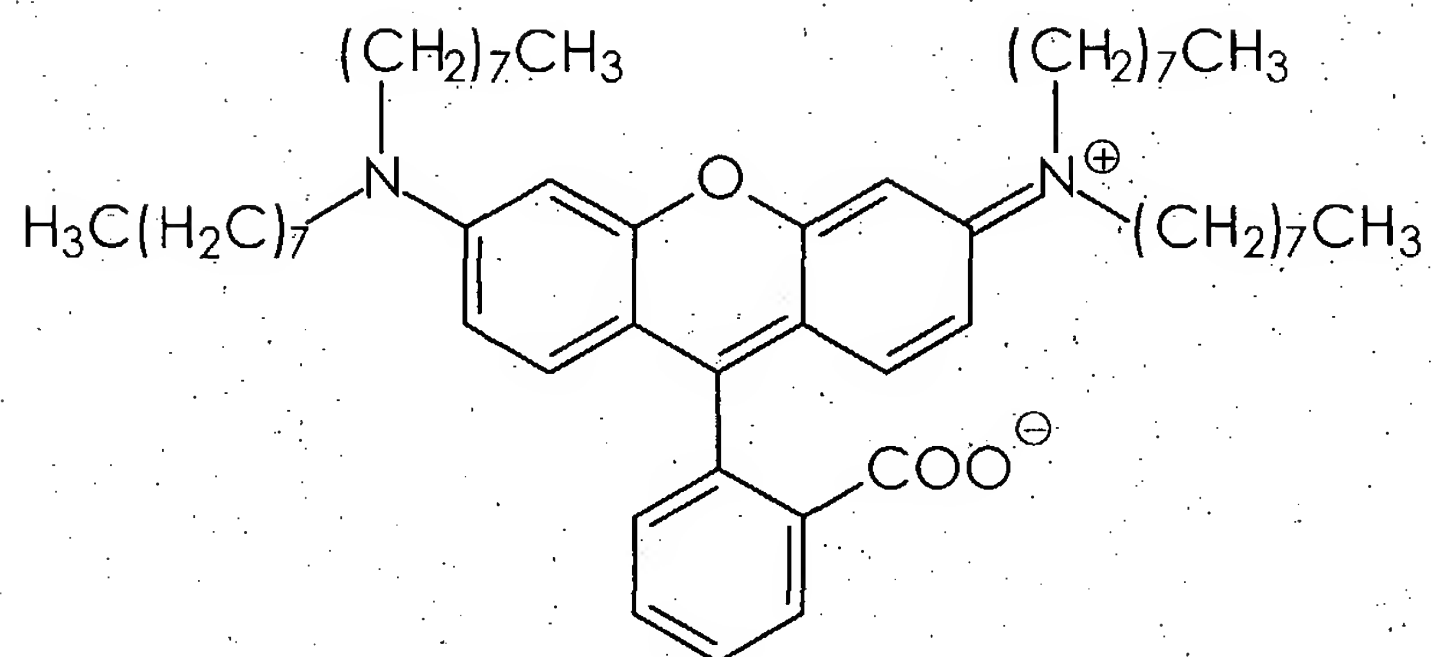


88. A phase change ink composition according to claim 87 wherein A is dodecylbenzene sulfonate, p-toluene sulfonate, chloride, trifluoroacetate, methyl sulfonate, trifluoromethyl sulfonate, bromide, or mixtures thereof.

89. A phase change ink composition comprising a phase change ink carrier and a colorant compound of the formula

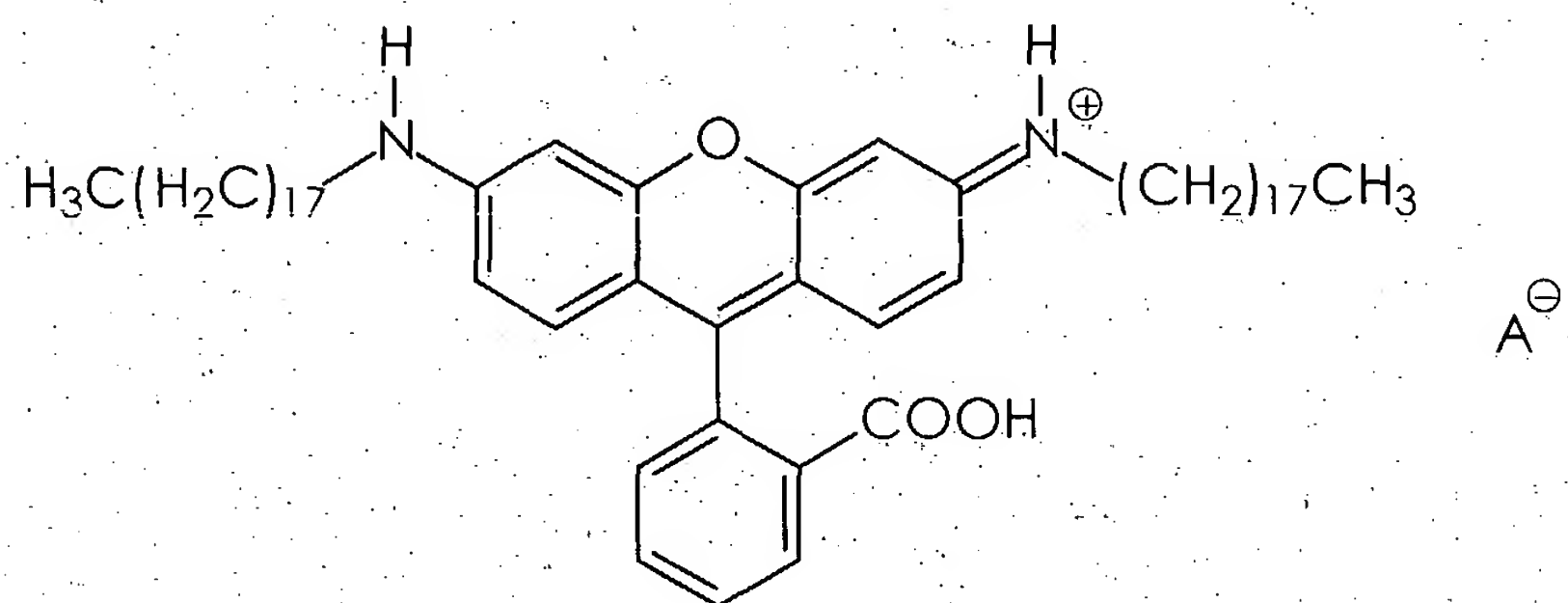


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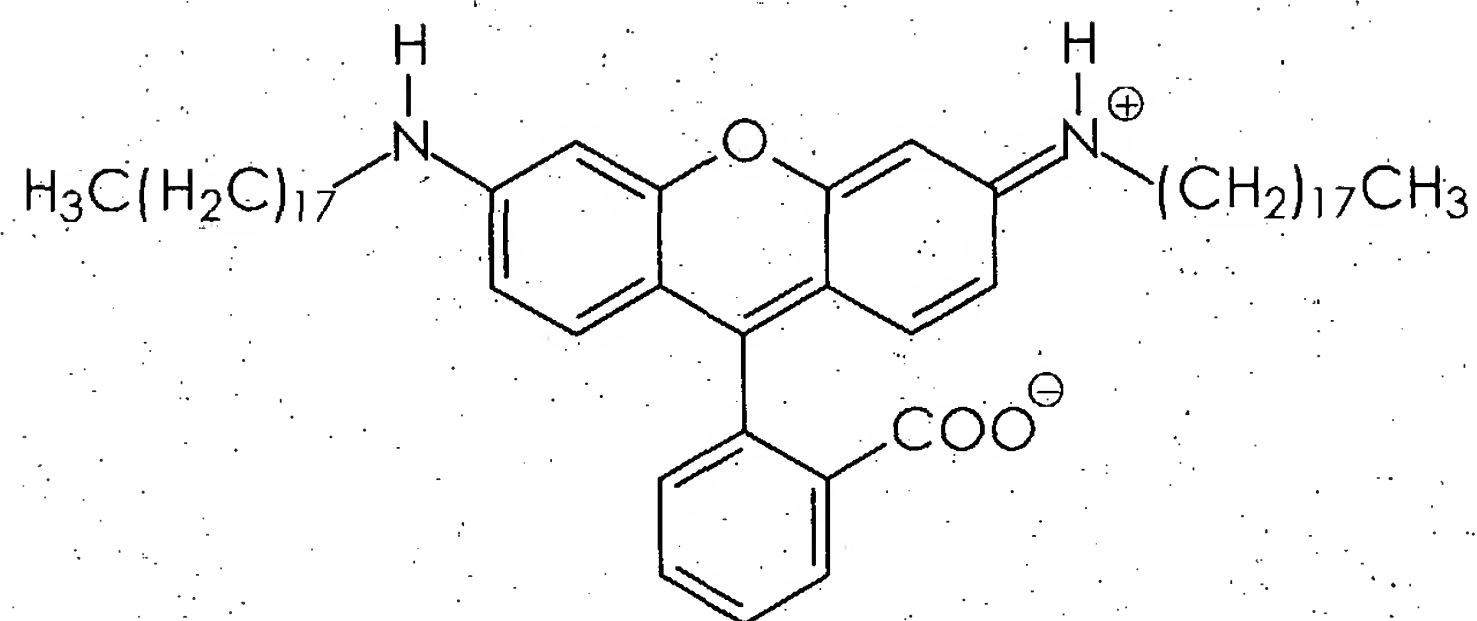


wherein A is an anion.

90. A phase change ink composition comprising a phase change ink carrier and a colorant compound of the formula

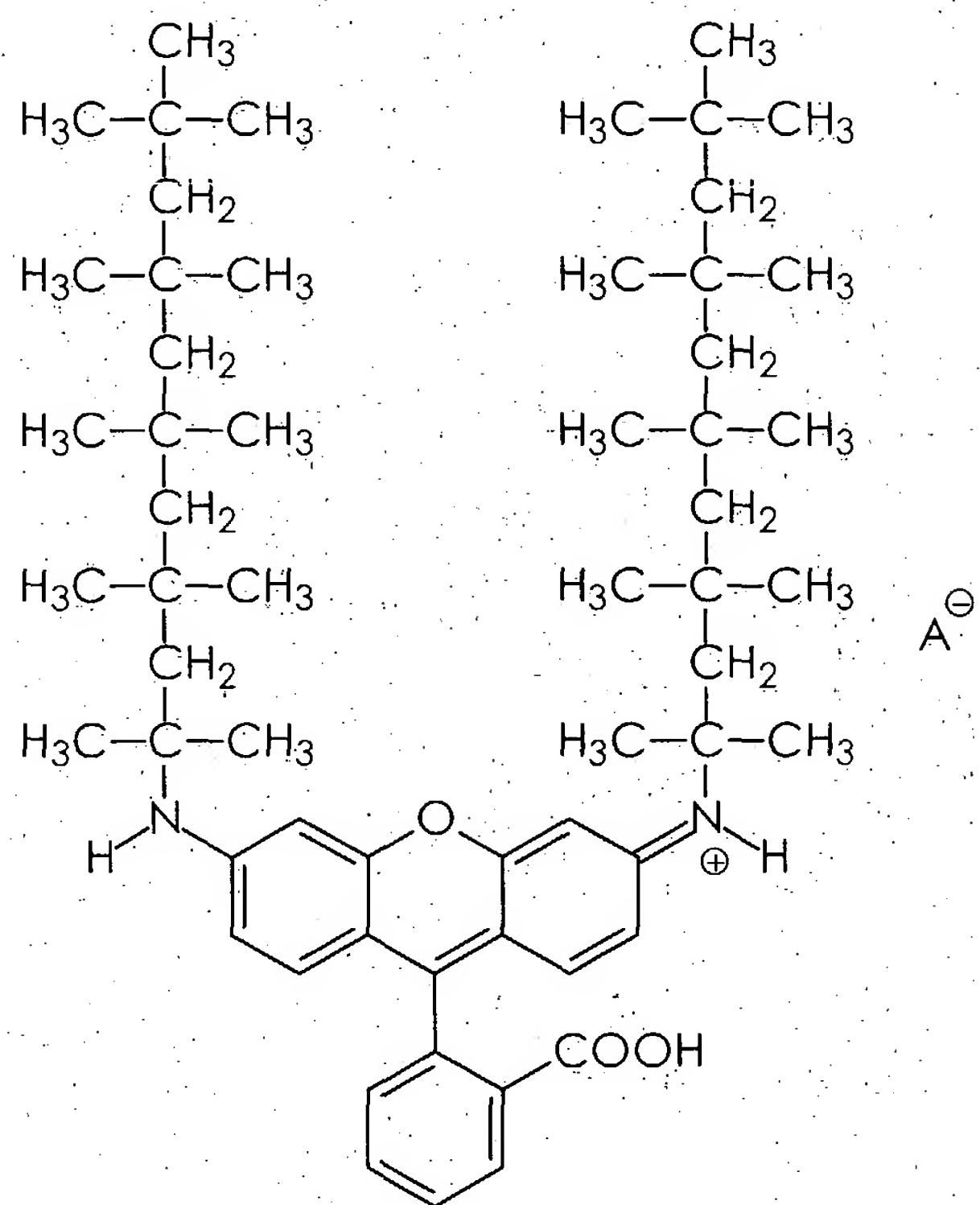


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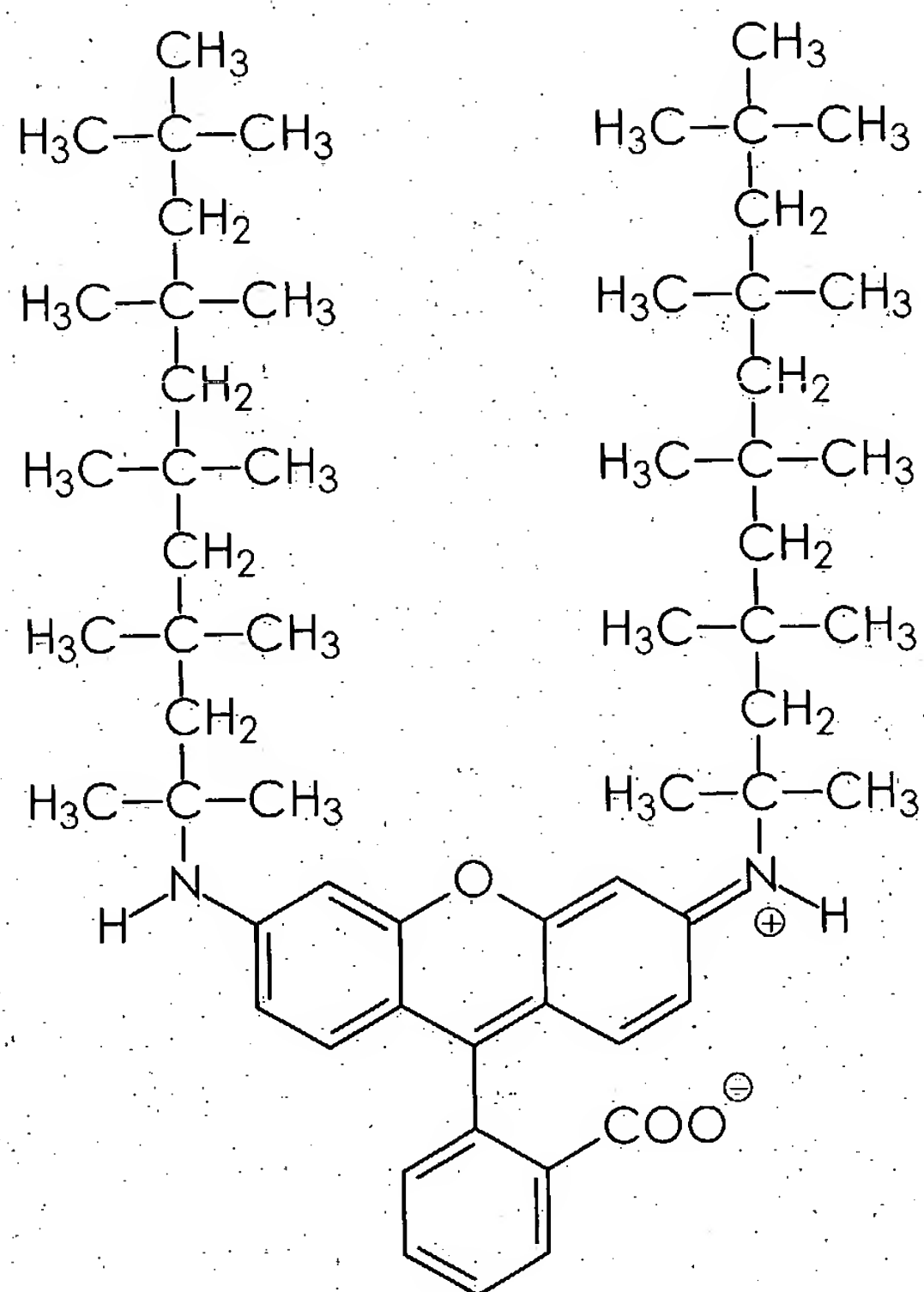


wherein A is an anion.

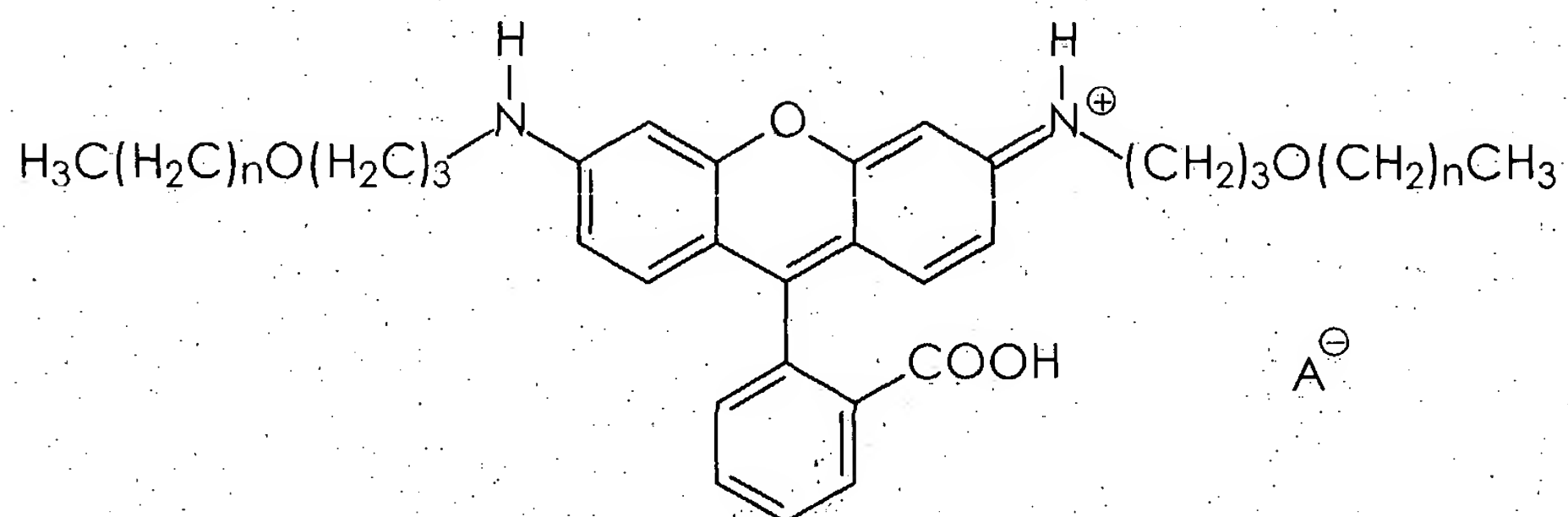
91. A phase change ink composition according to claim 1 wherein the colorant is of the formula



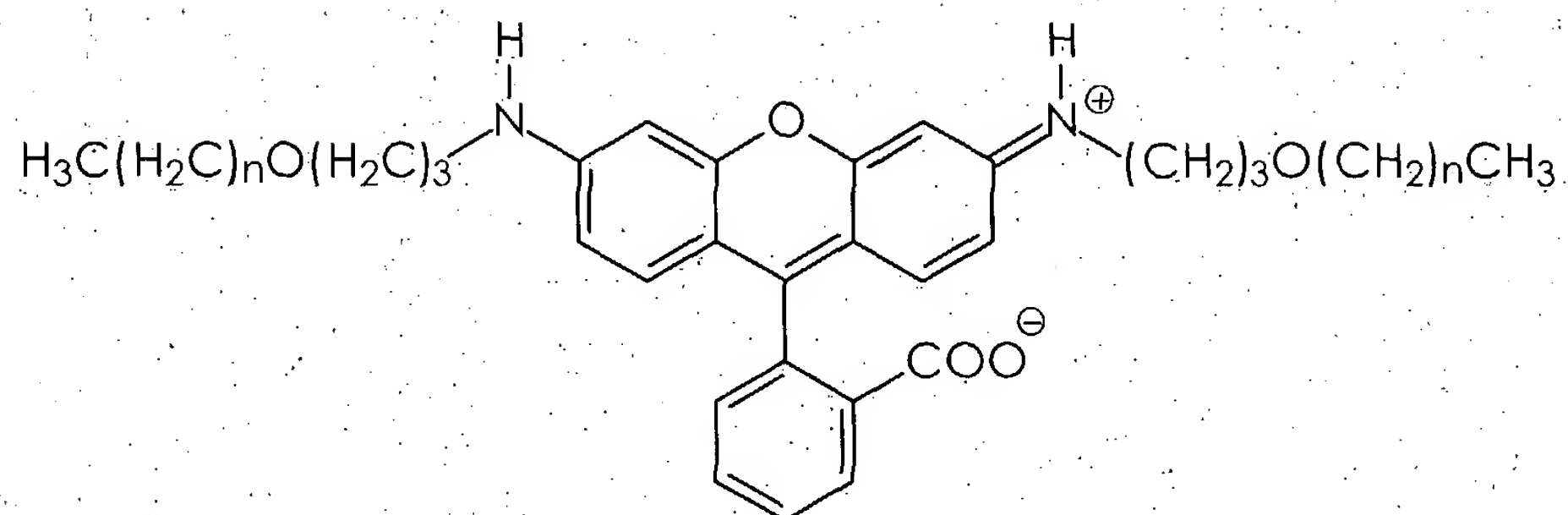
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92. A phase change ink composition according to claim 1 wherein the colorant is of the formula

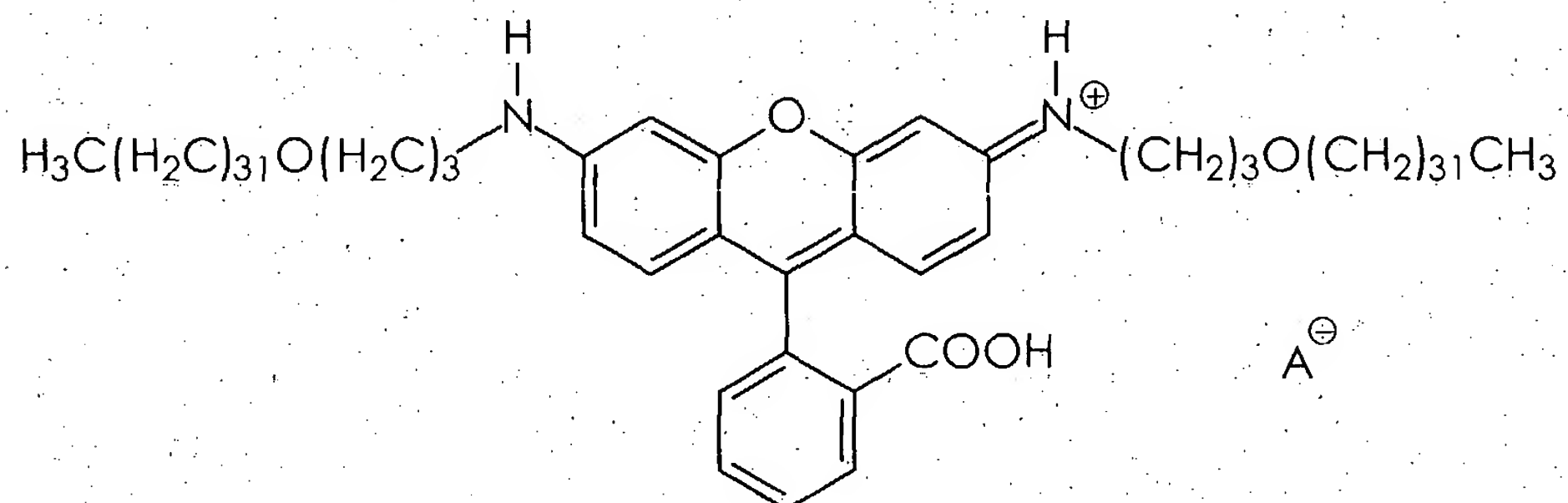


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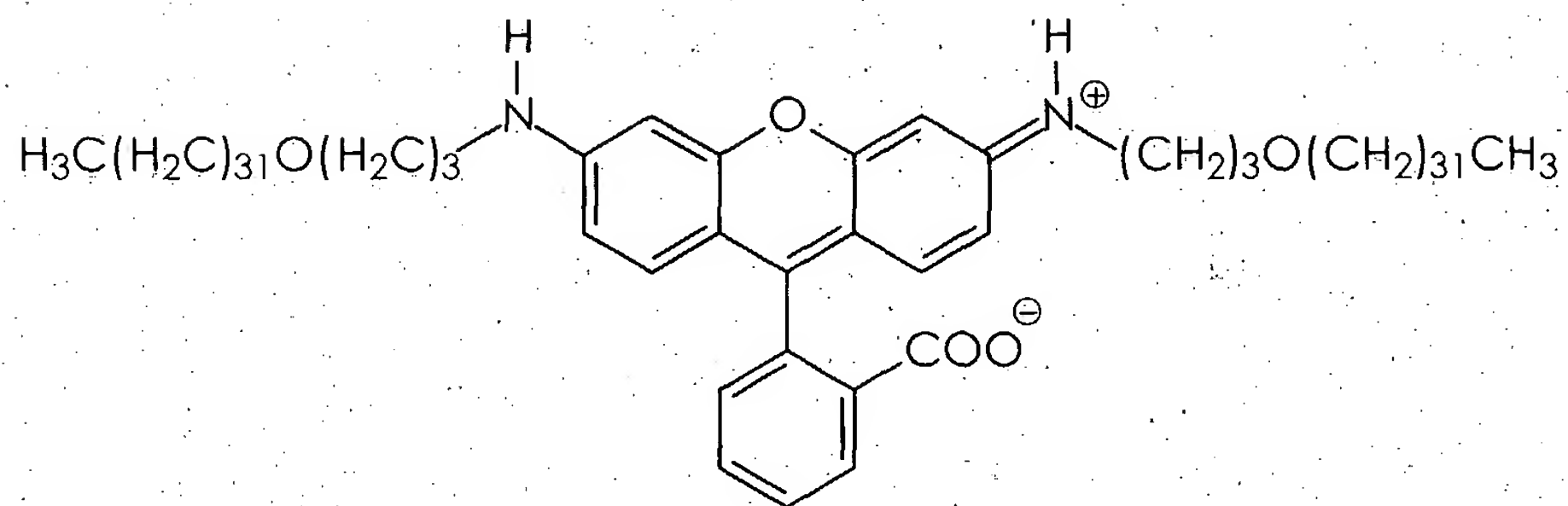


wherein n is at least about 11.

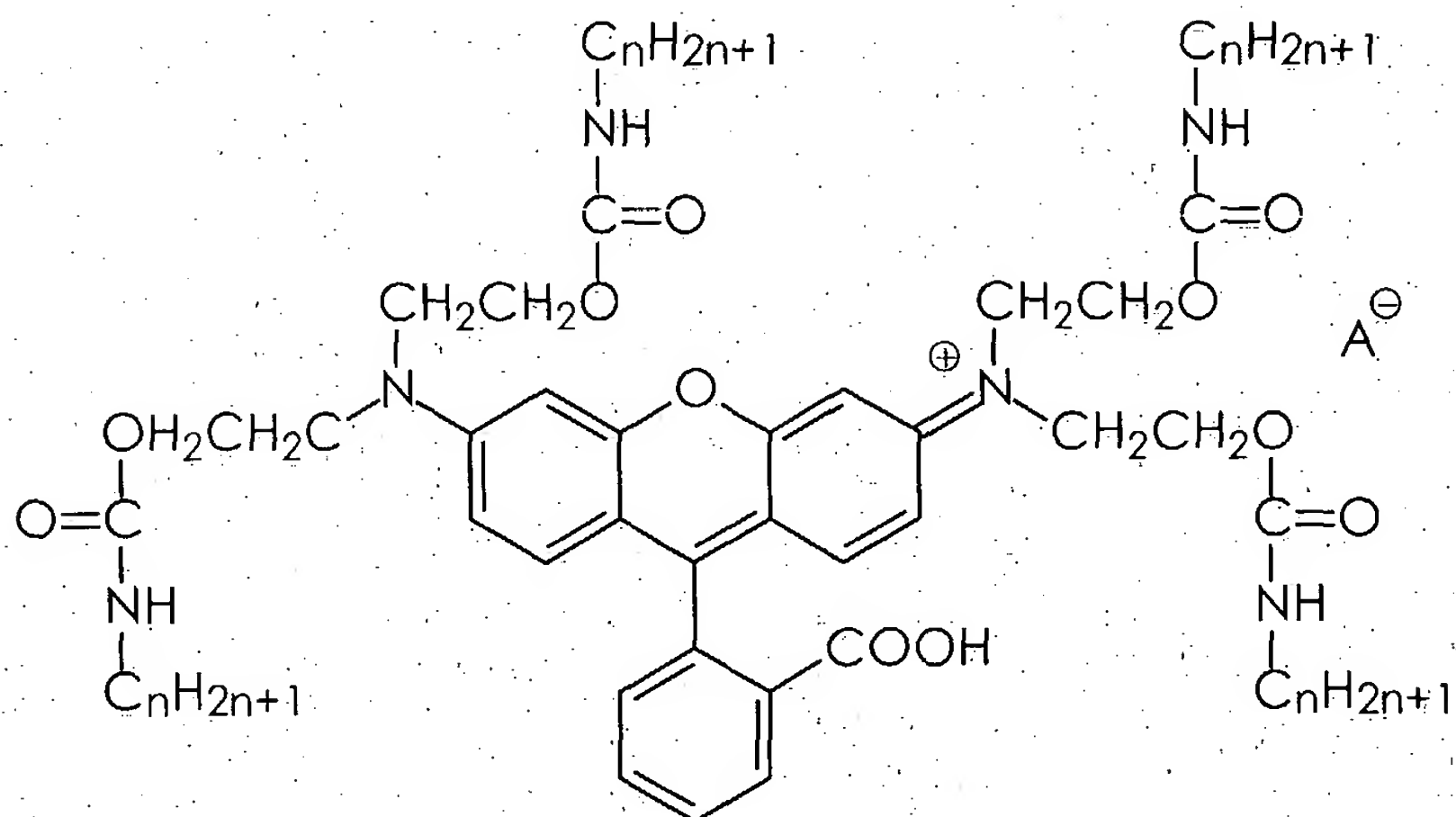
93. A phase change ink composition according to claim 1 wherein the colorant is of the formula



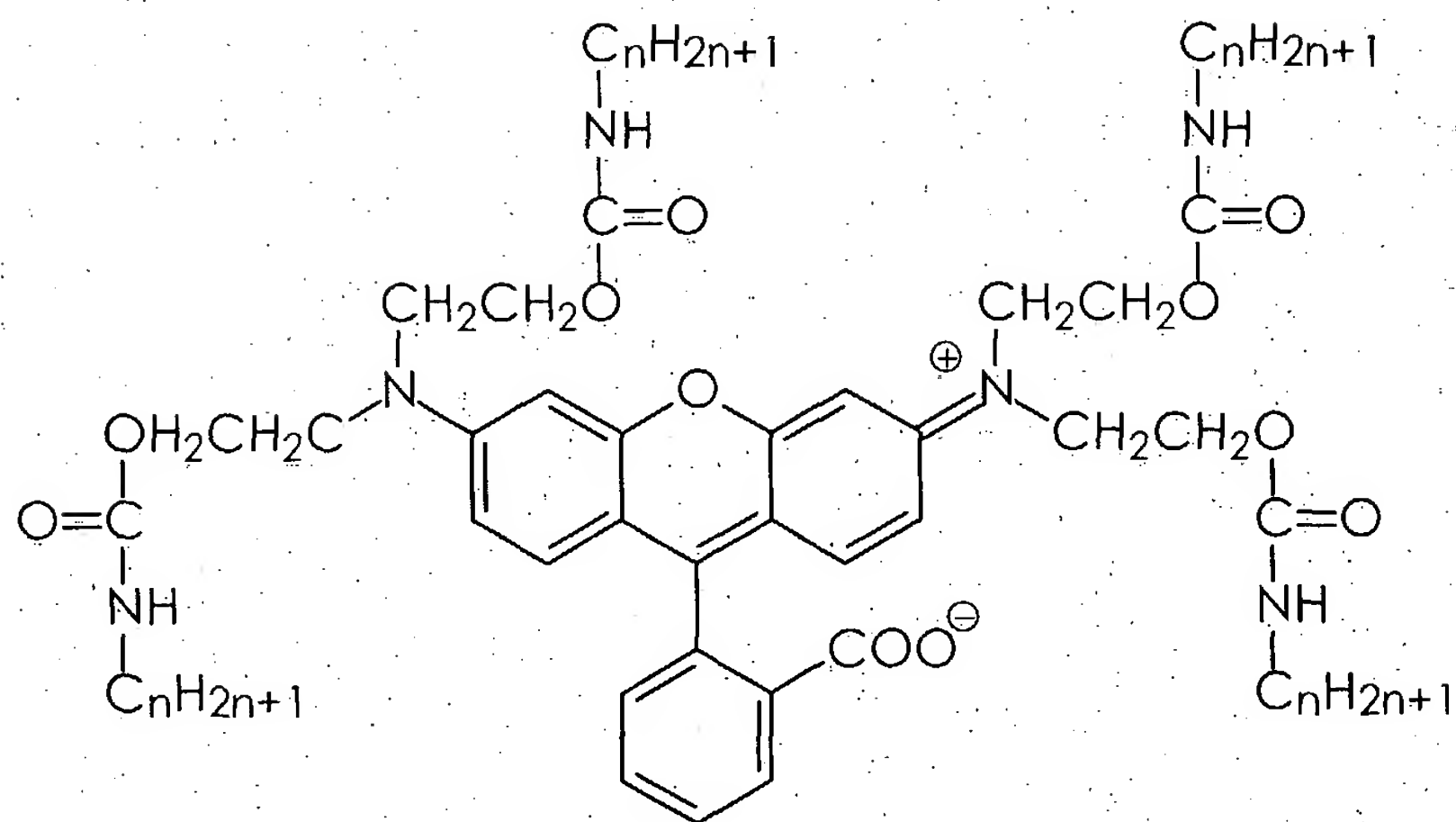
or



94. A phase change ink composition according to claim 1 wherein the colorant is of the formula

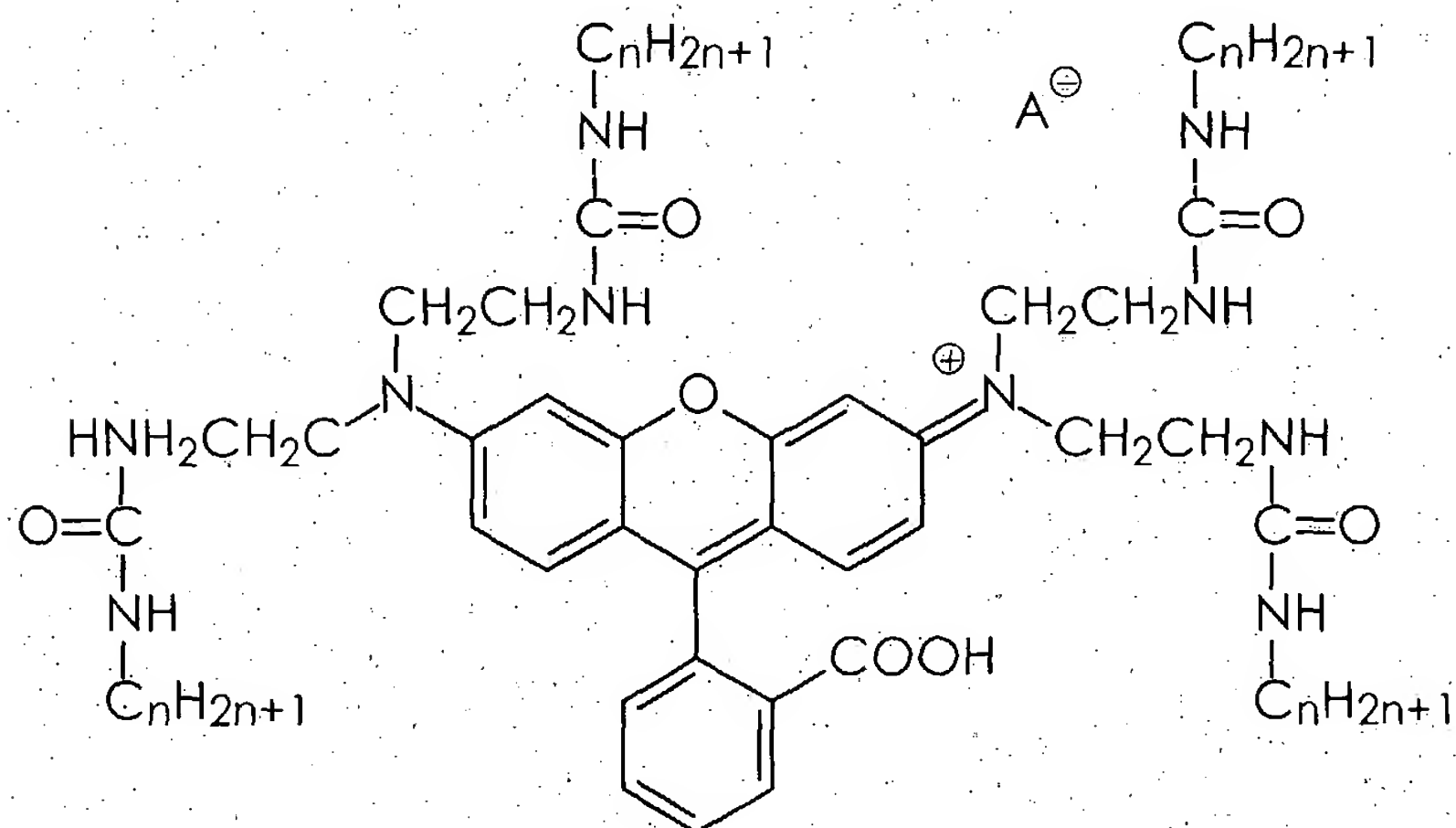


or

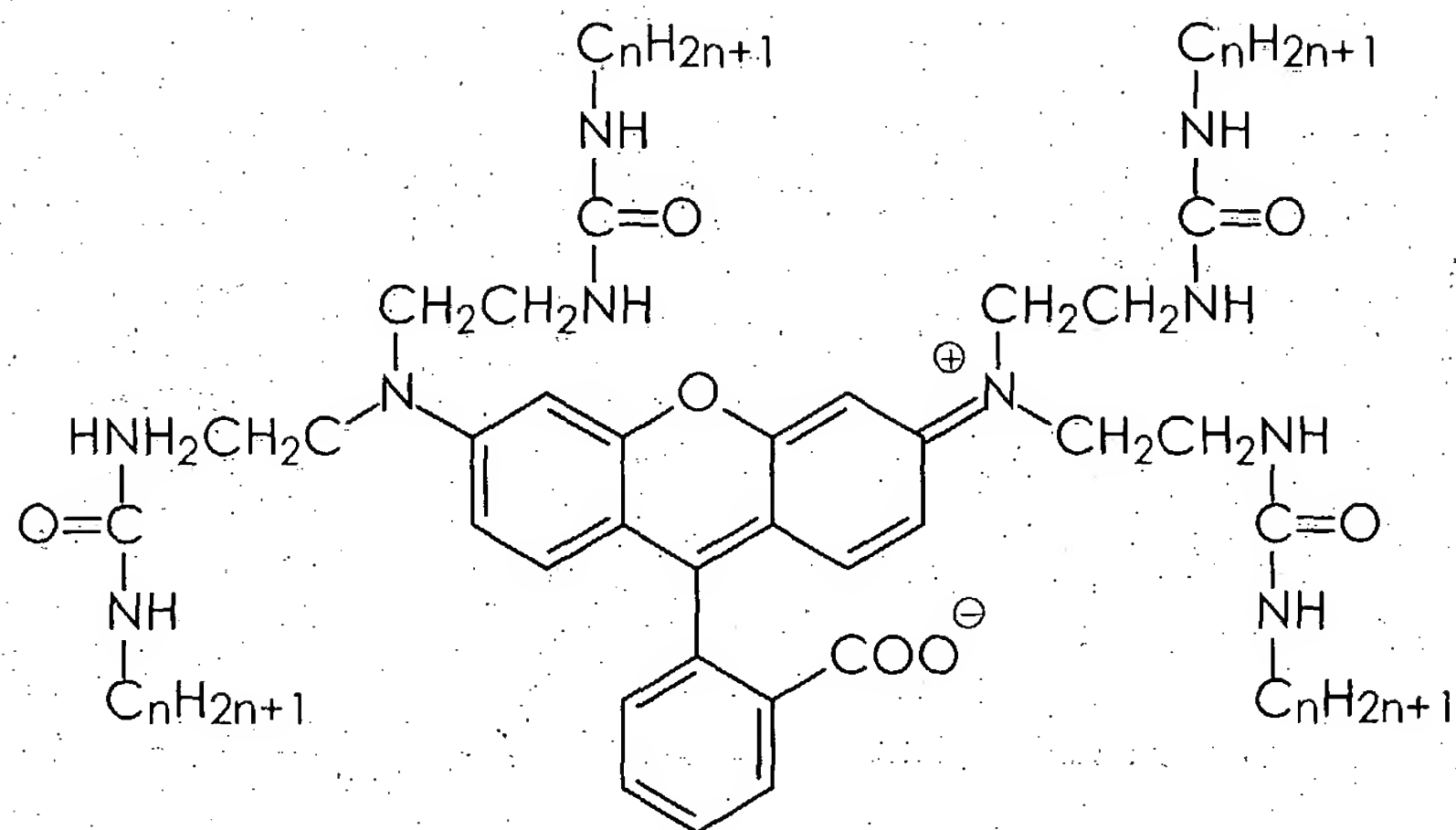


wherein n is at least about 12.

95. A phase change ink composition according to claim 1 wherein the colorant is of the formula

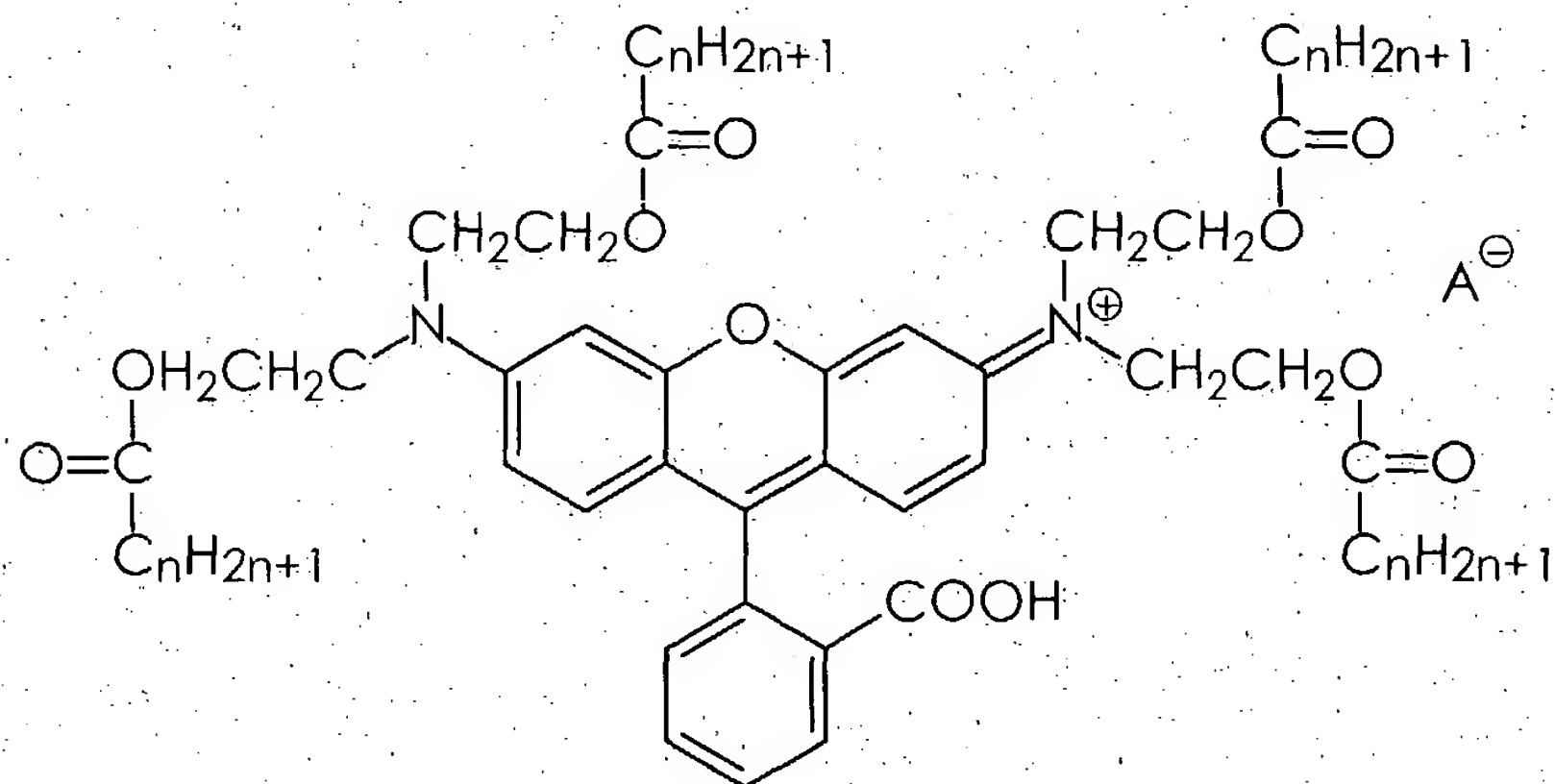


or

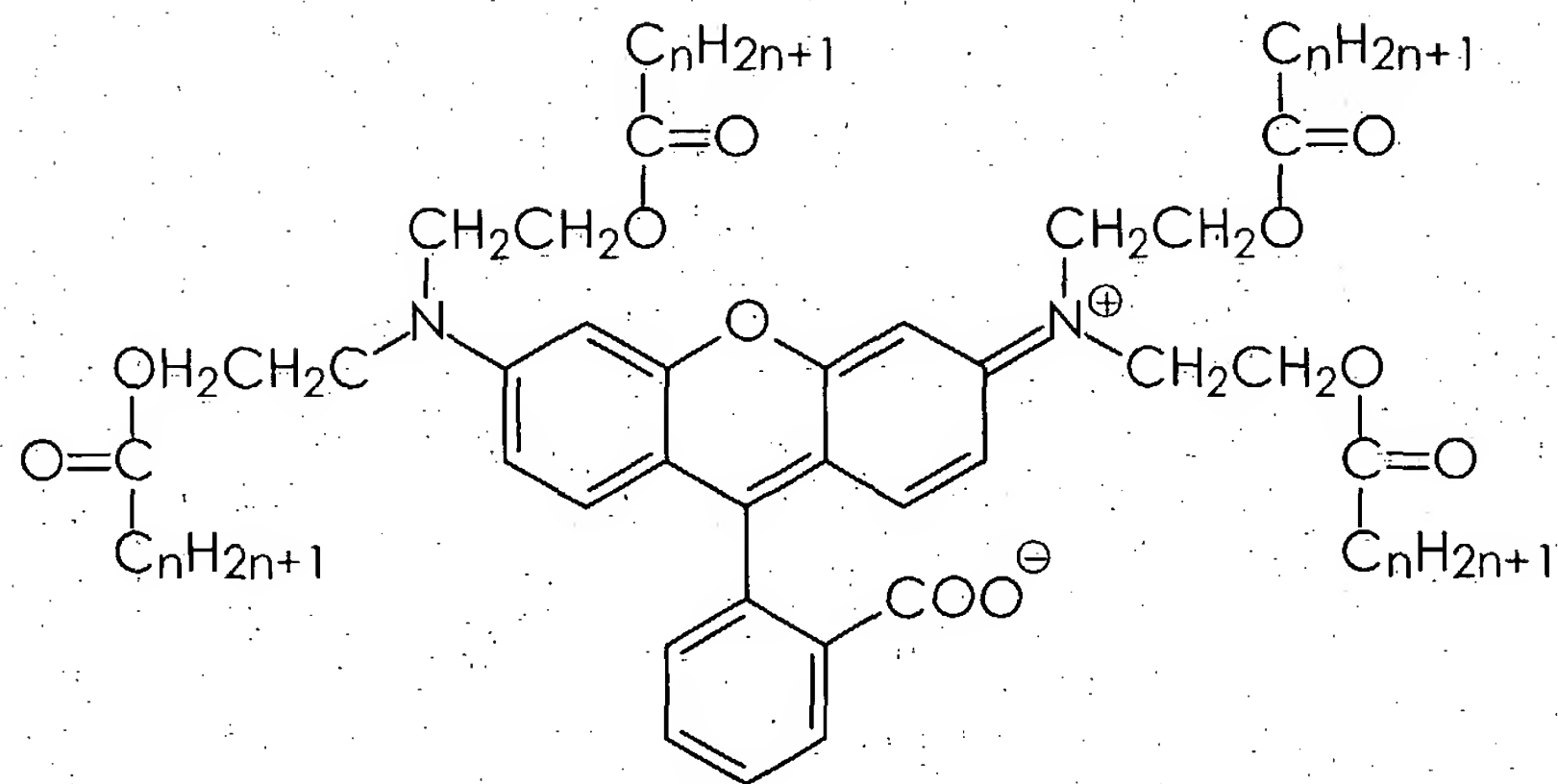


wherein n is at least about 12.

96. A phase change ink composition according to claim 1 wherein the colorant is of the formula

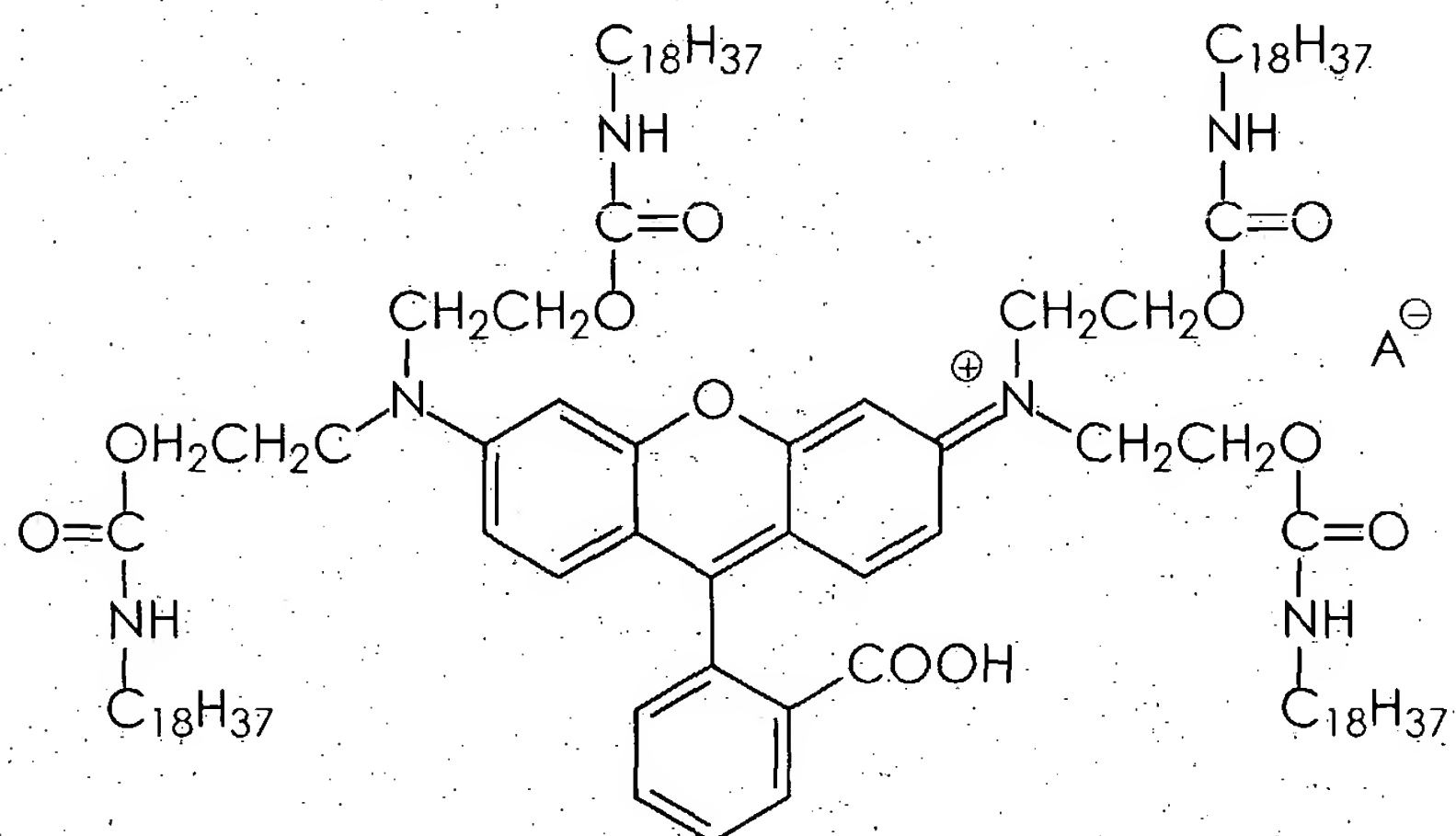


or

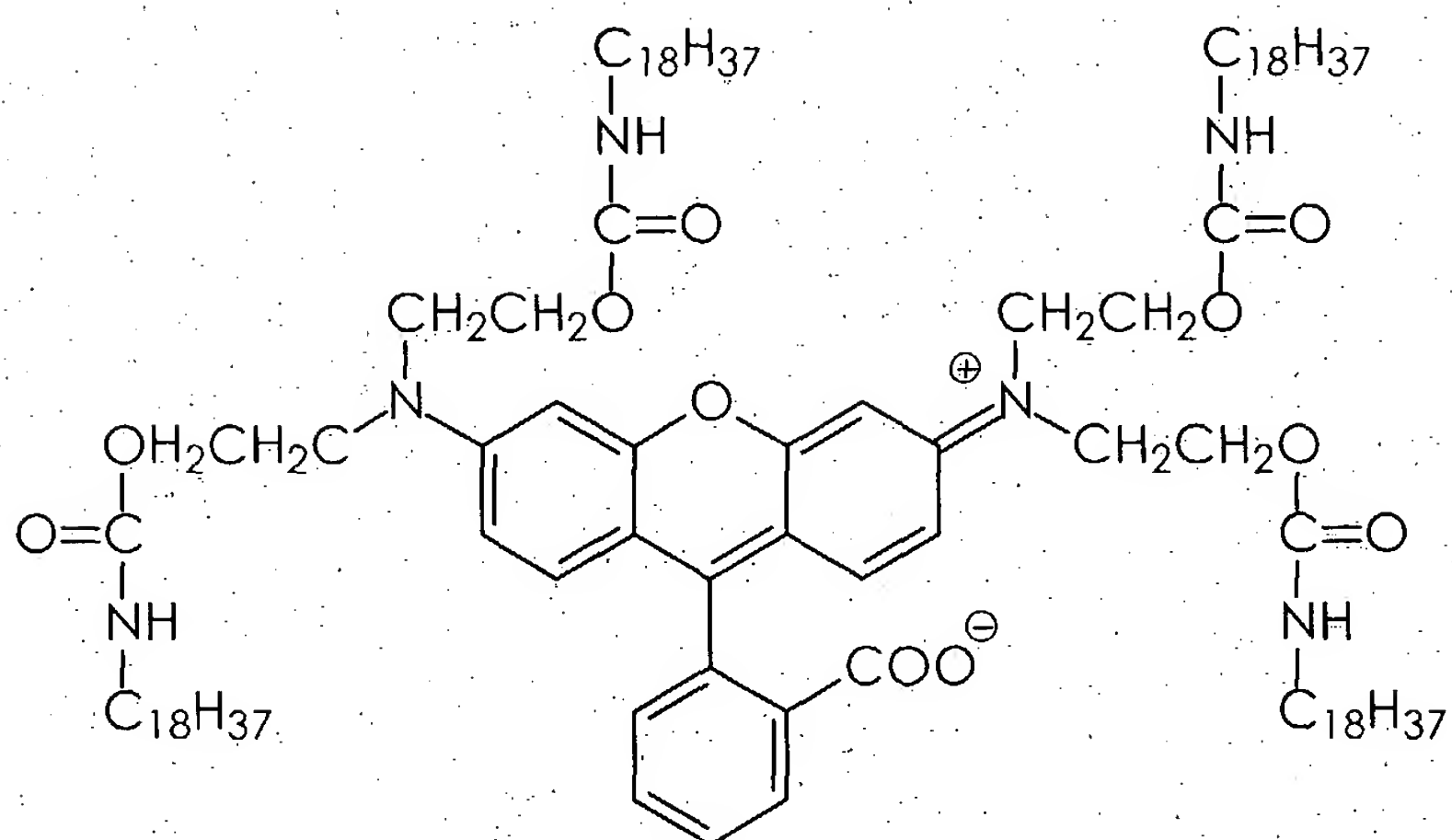


wherein n is at least about 12.

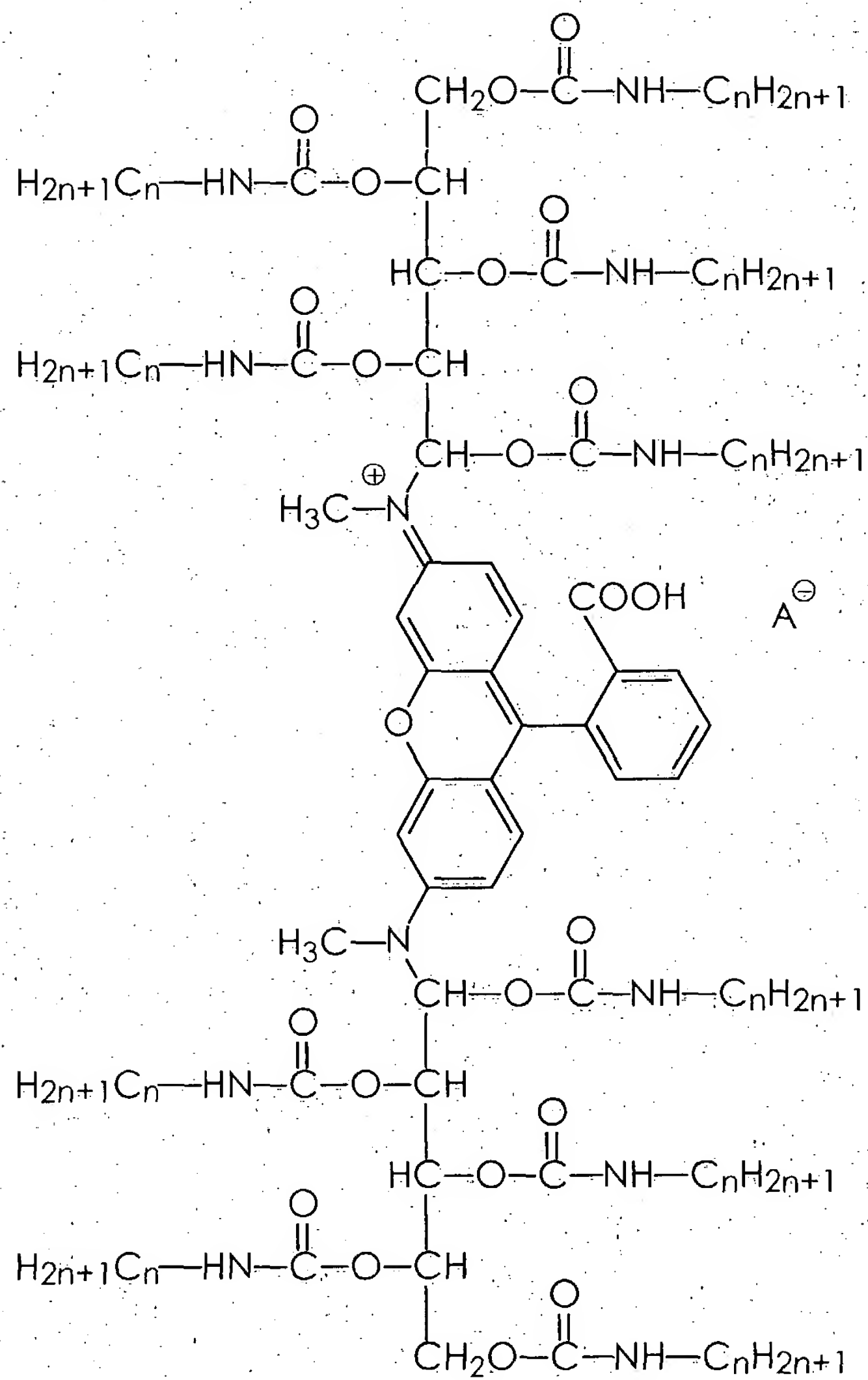
97. A phase change ink composition according to claim 1 wherein the colorant is of the formula

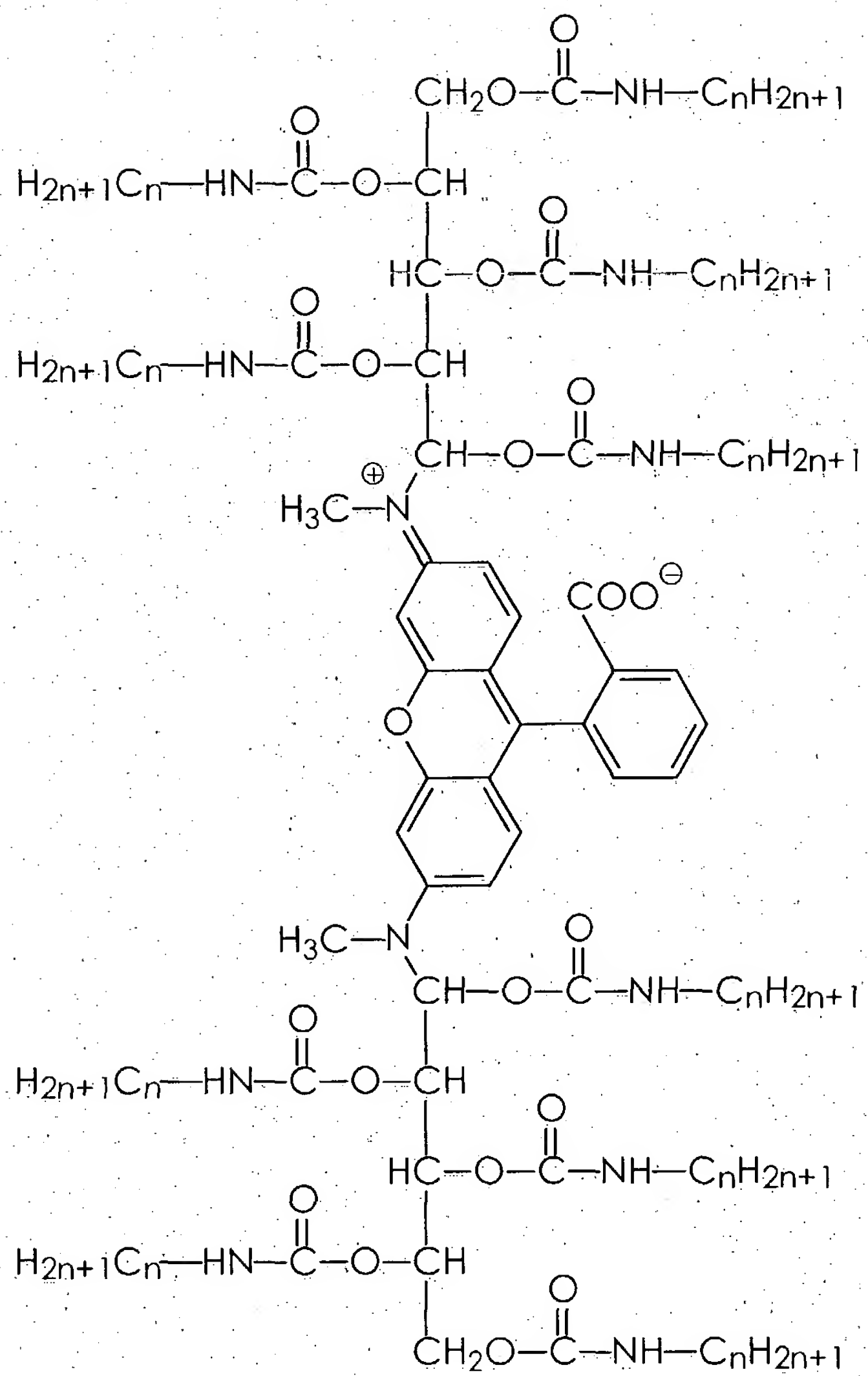


or



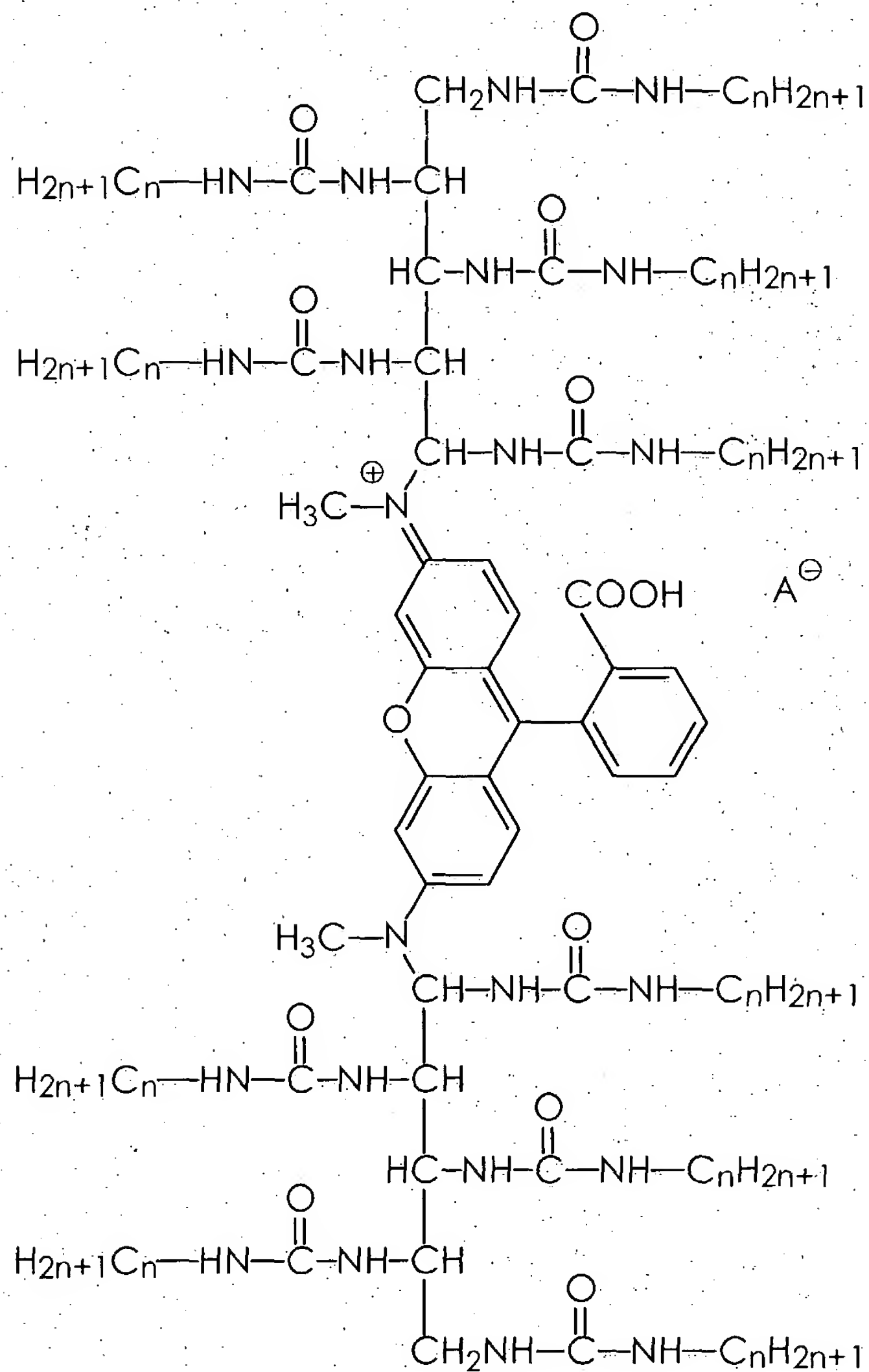
or



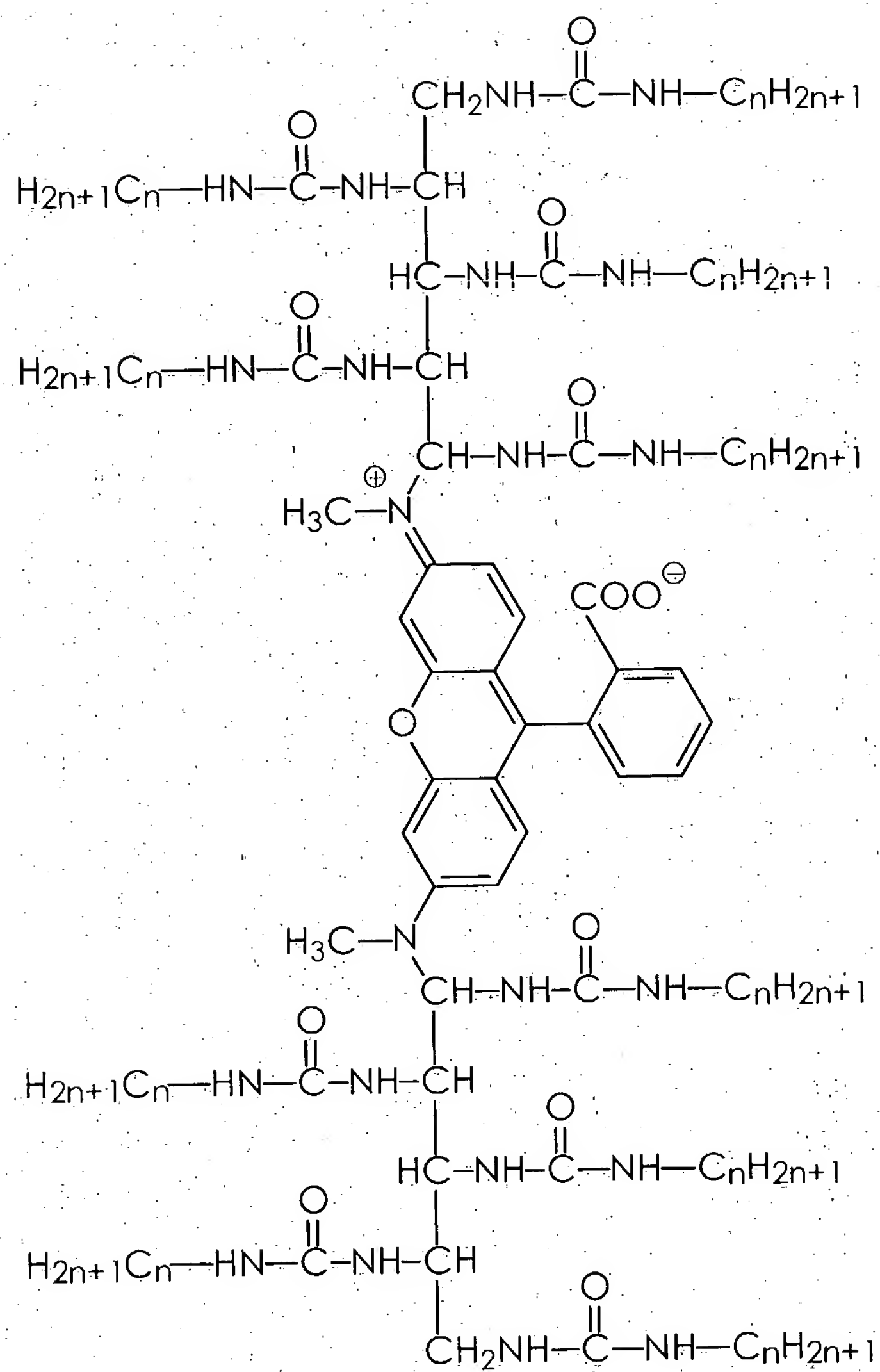


wherein n is at least about 12.

99. A phase change ink composition according to claim 1 wherein the colorant is of the formula

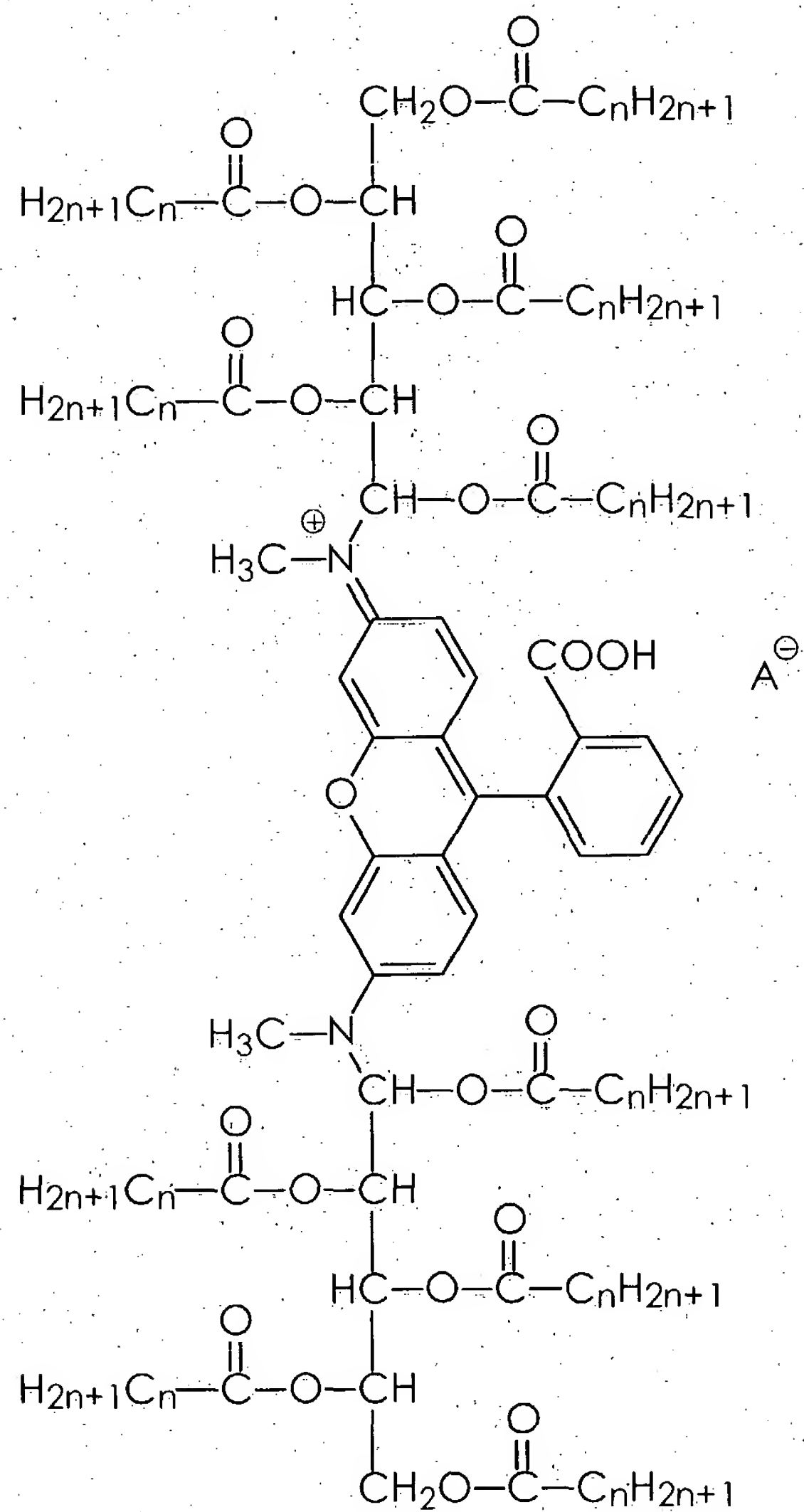


or

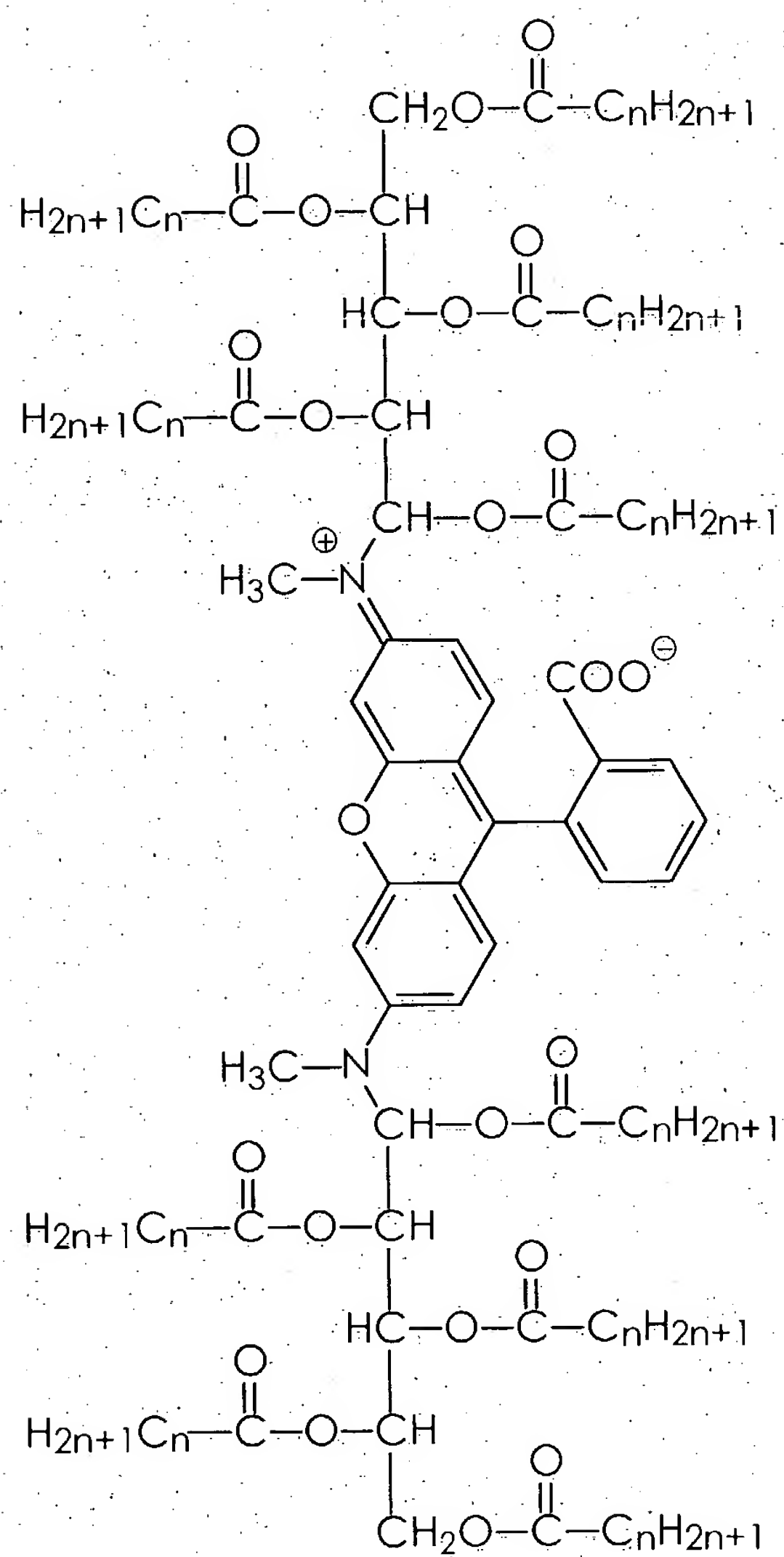


wherein n is at least about 12.

100. A phase change ink composition according to claim 1 wherein the colorant is of the formula

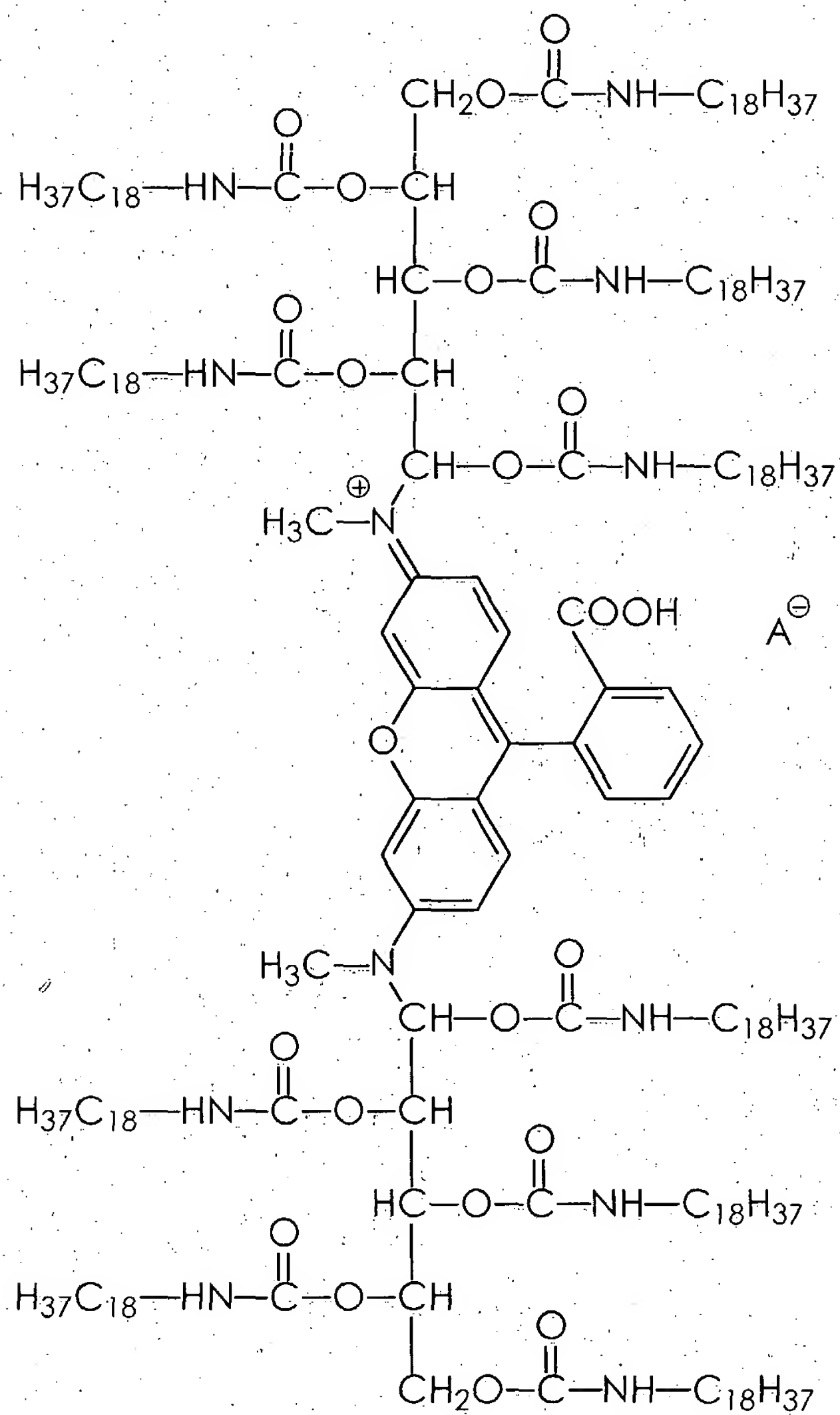


or

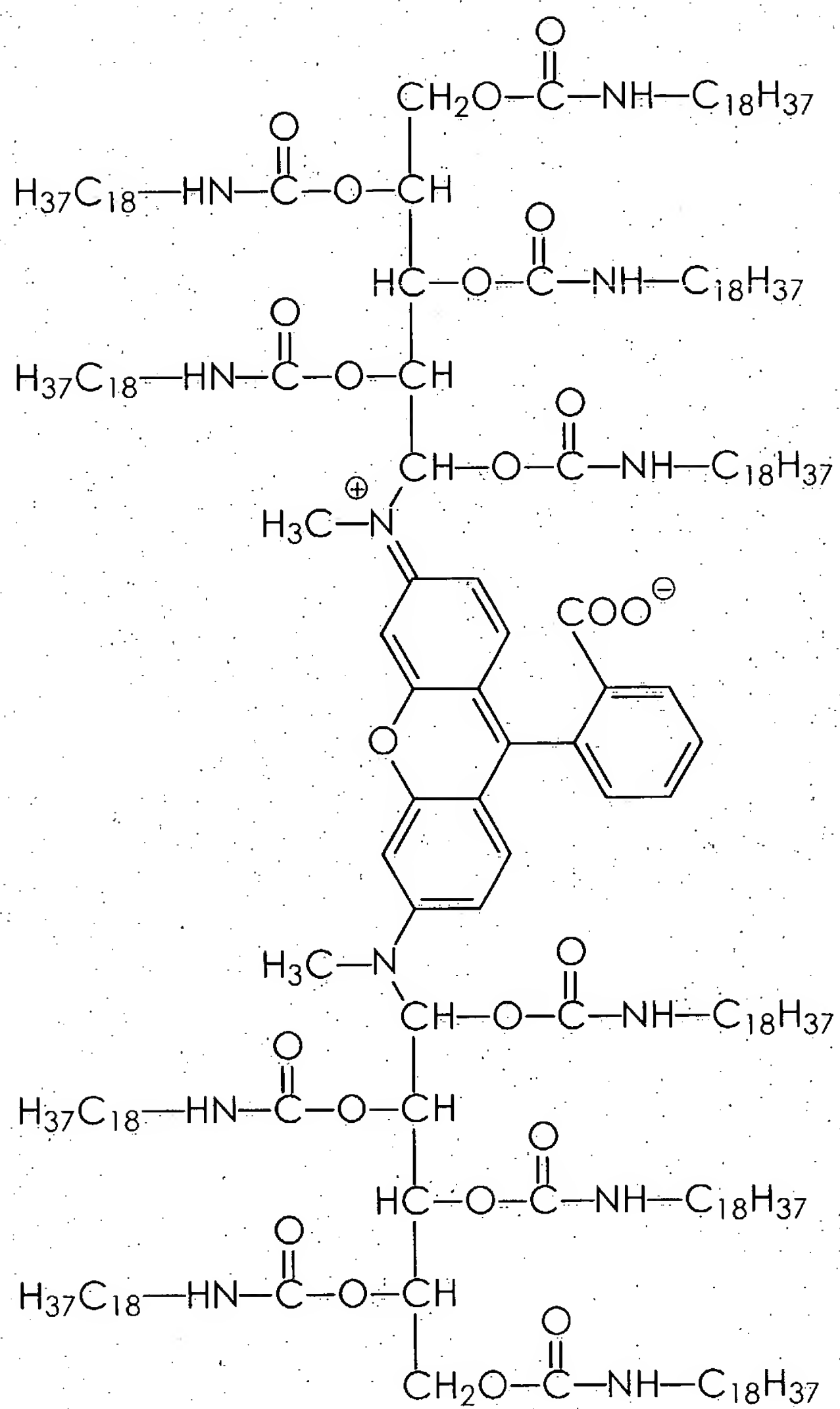


wherein n is at least about 12.

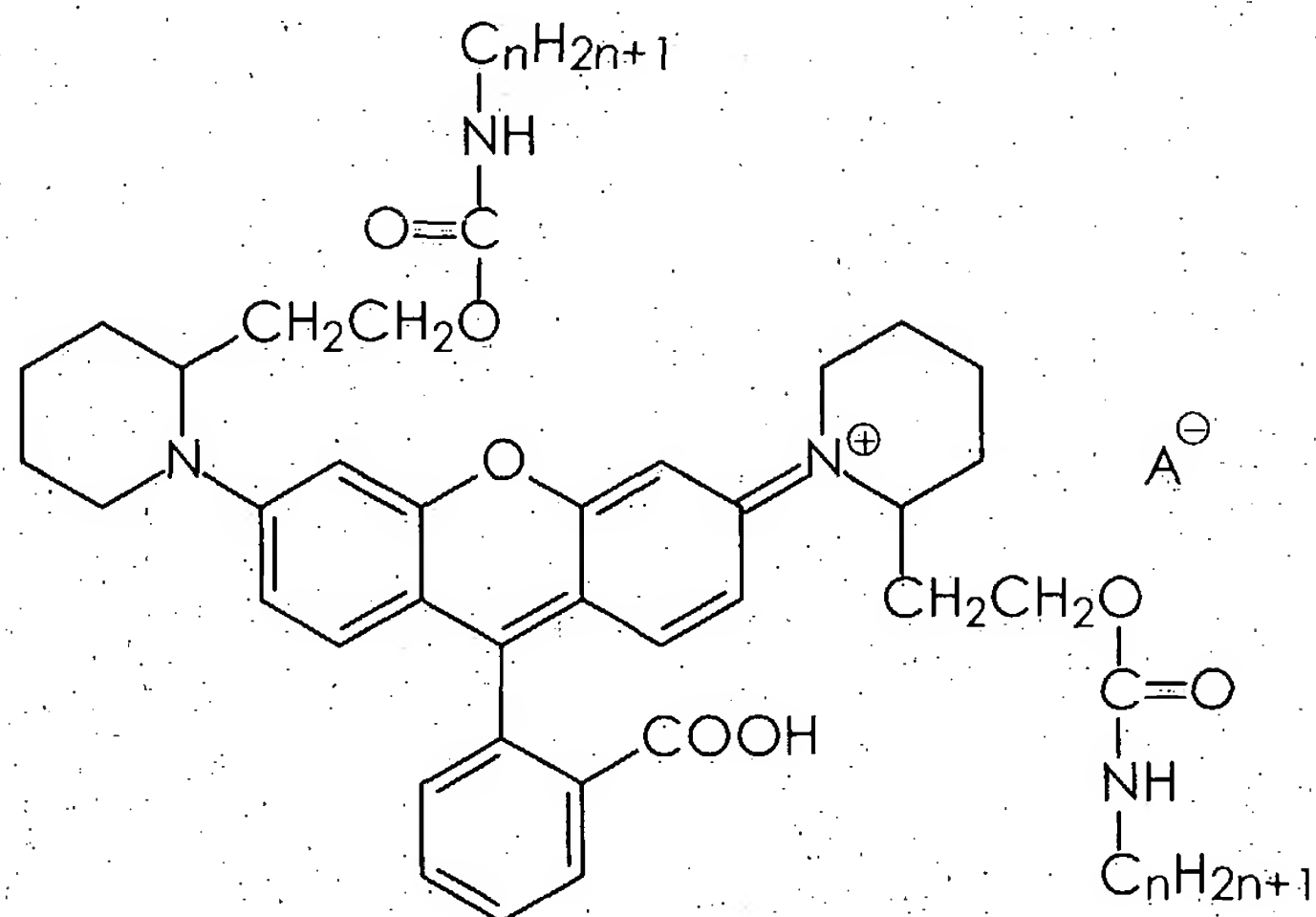
101. A phase change ink composition according to claim 1 wherein the colorant is of the formula



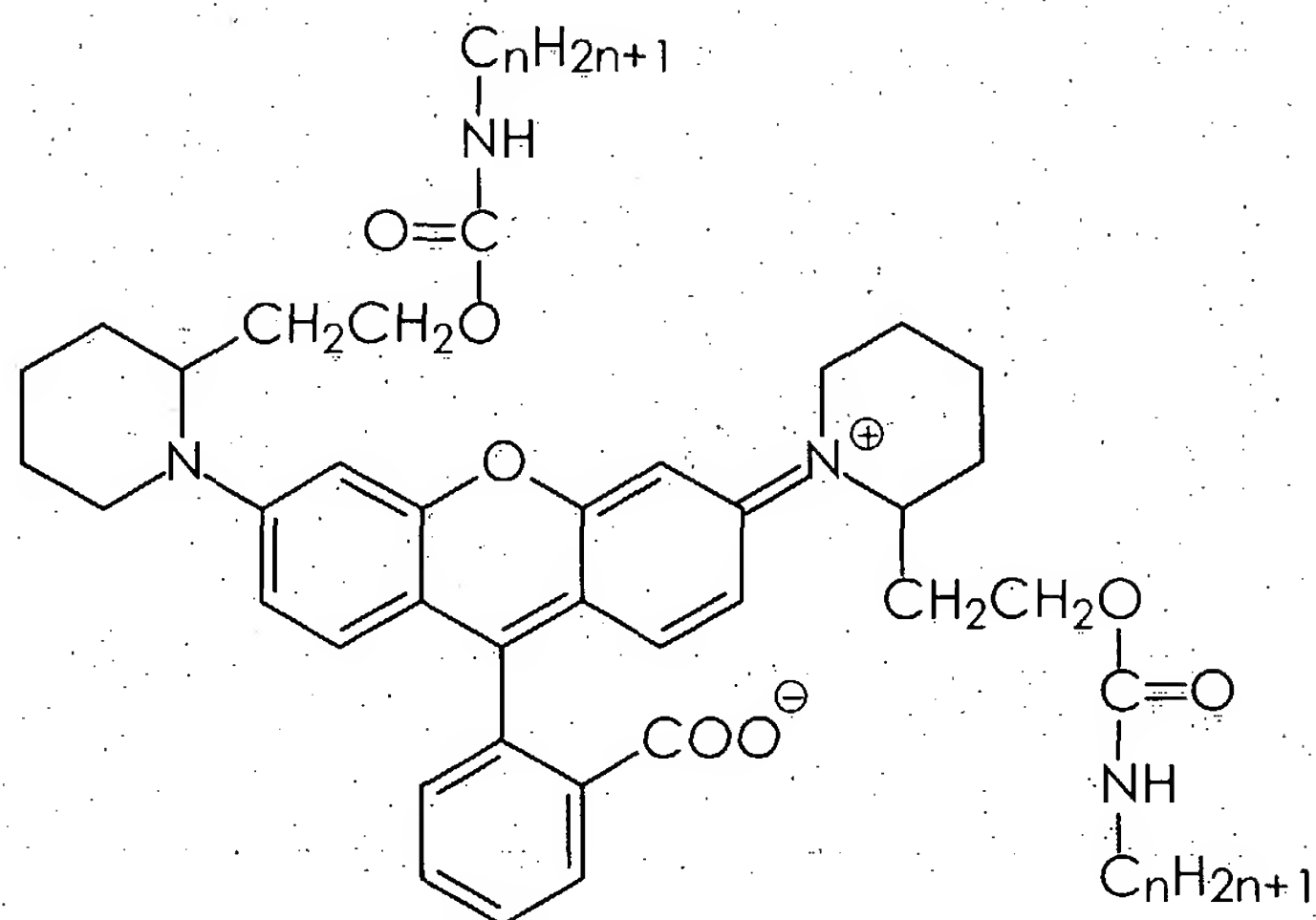
or



102. A phase change ink composition according to claim 1 wherein the colorant is of the formula

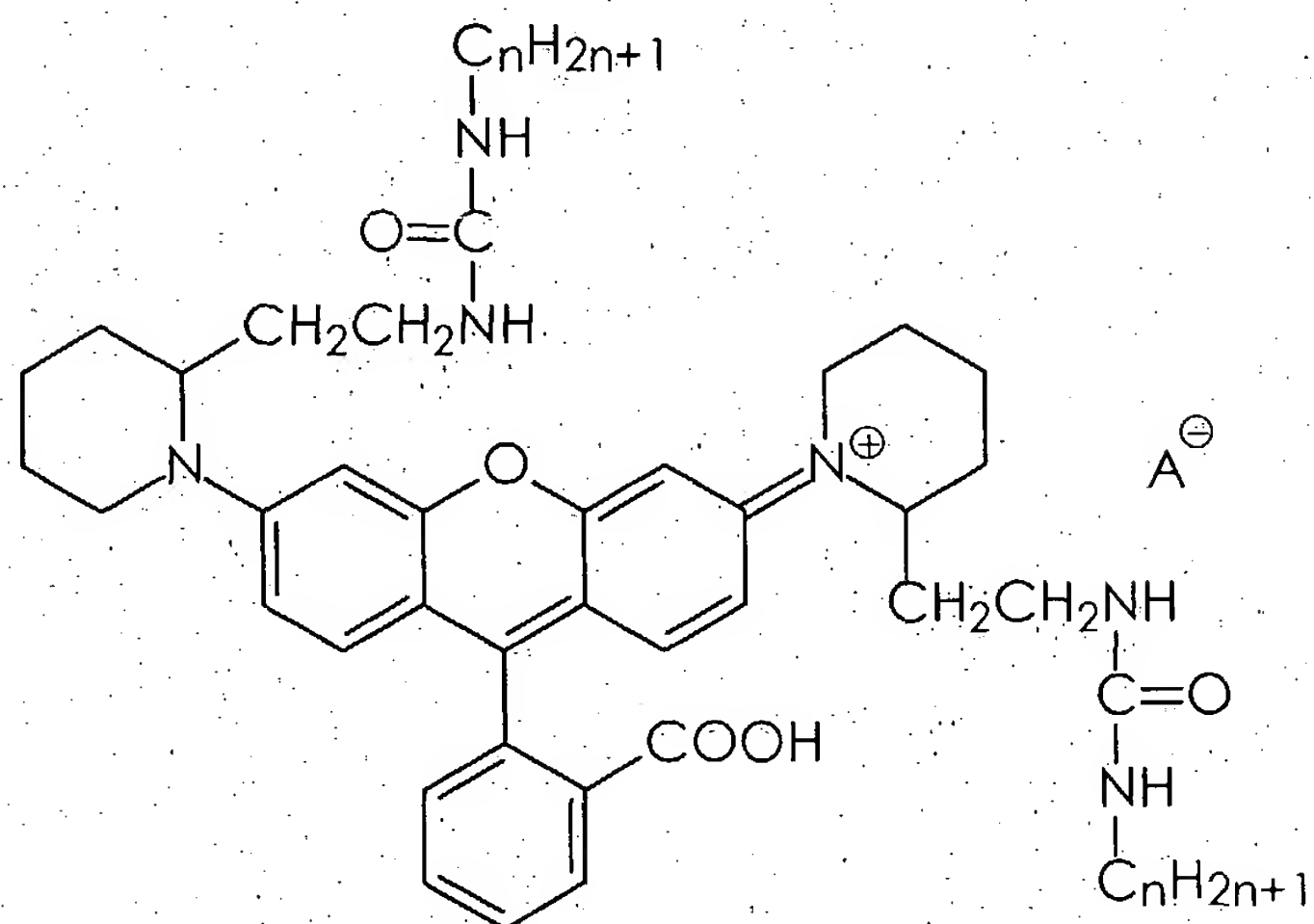


or

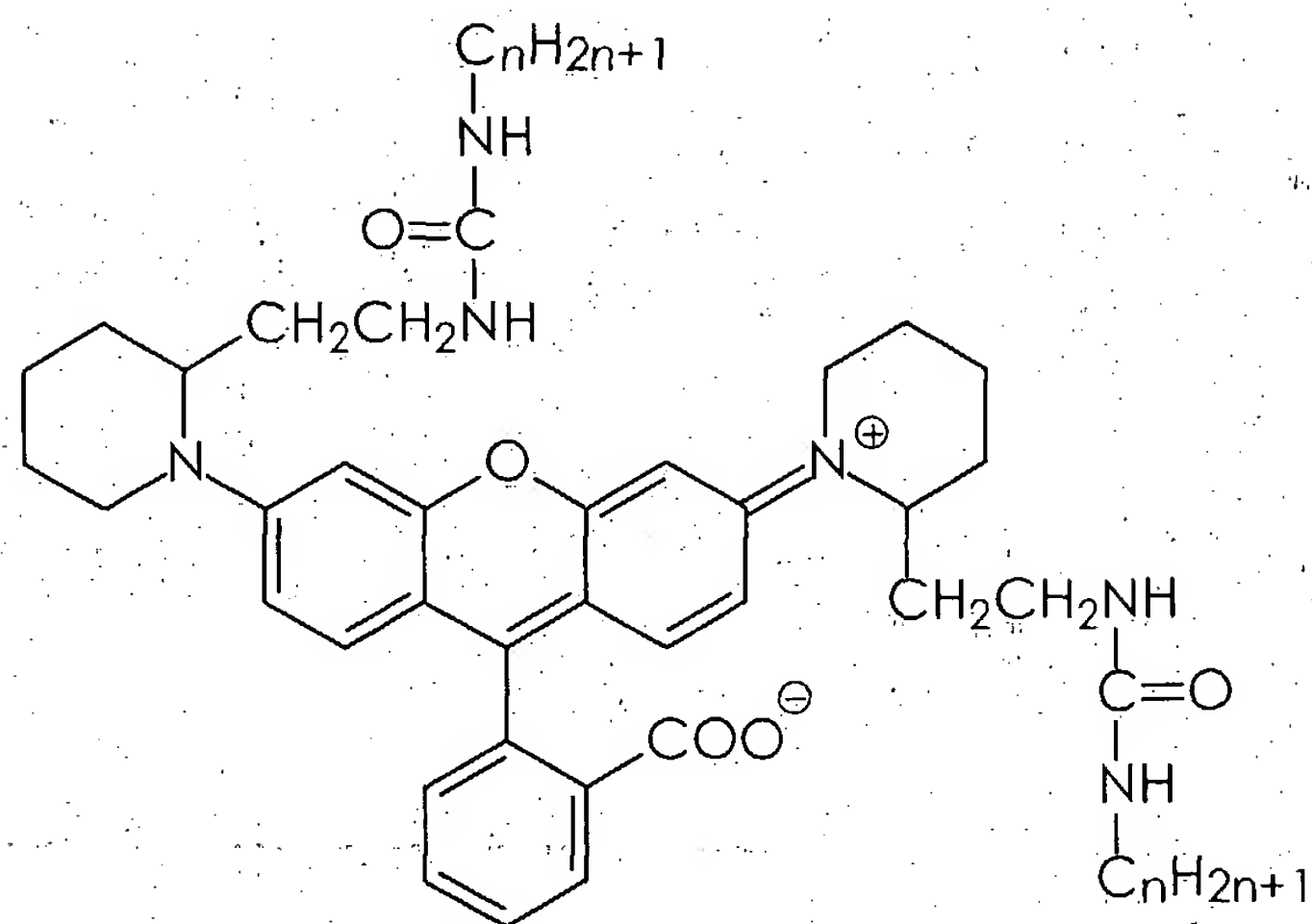


wherein n is at least about 12.

103. A phase change ink composition according to claim 1 wherein the colorant is of the formula

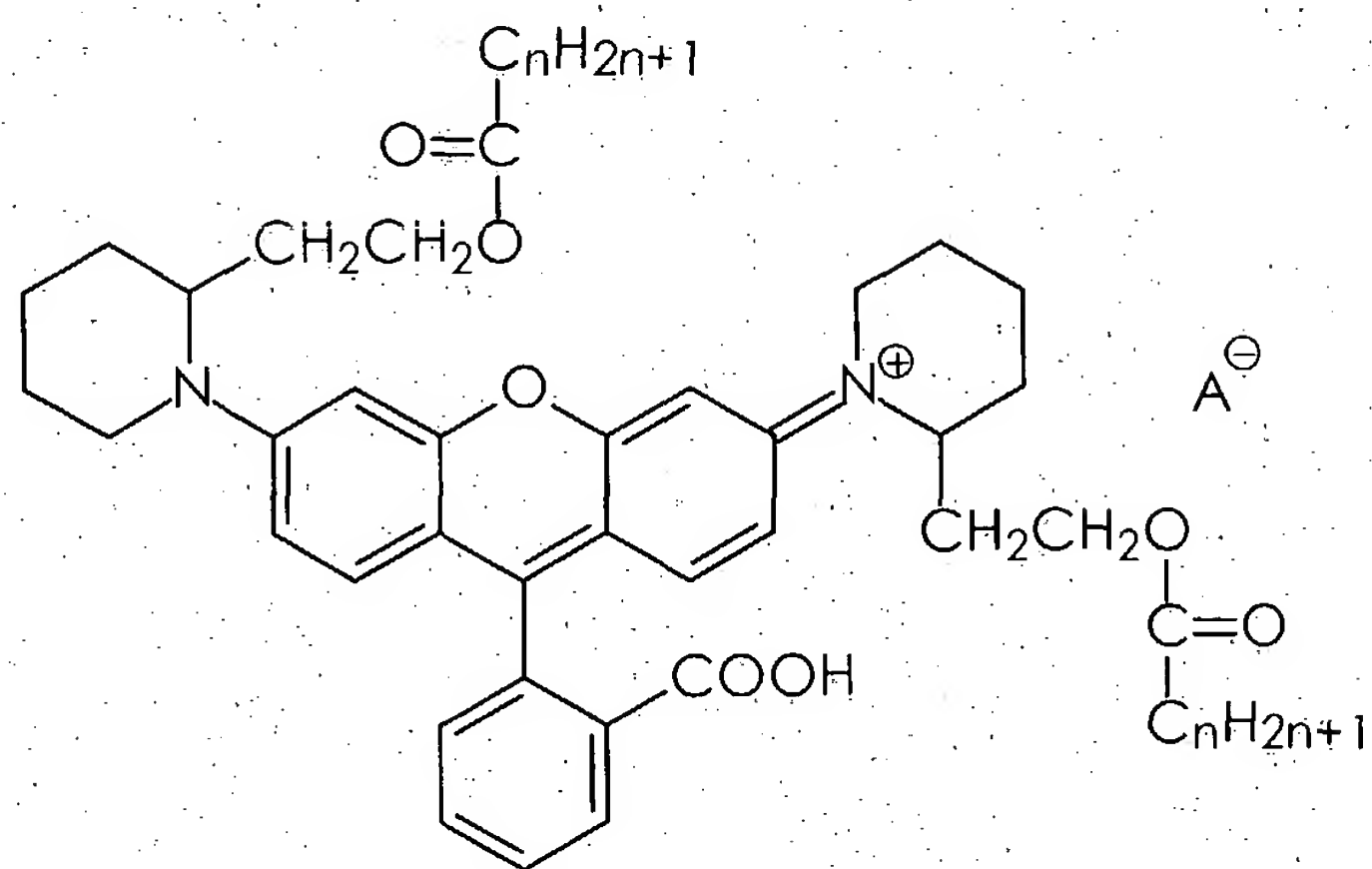


or

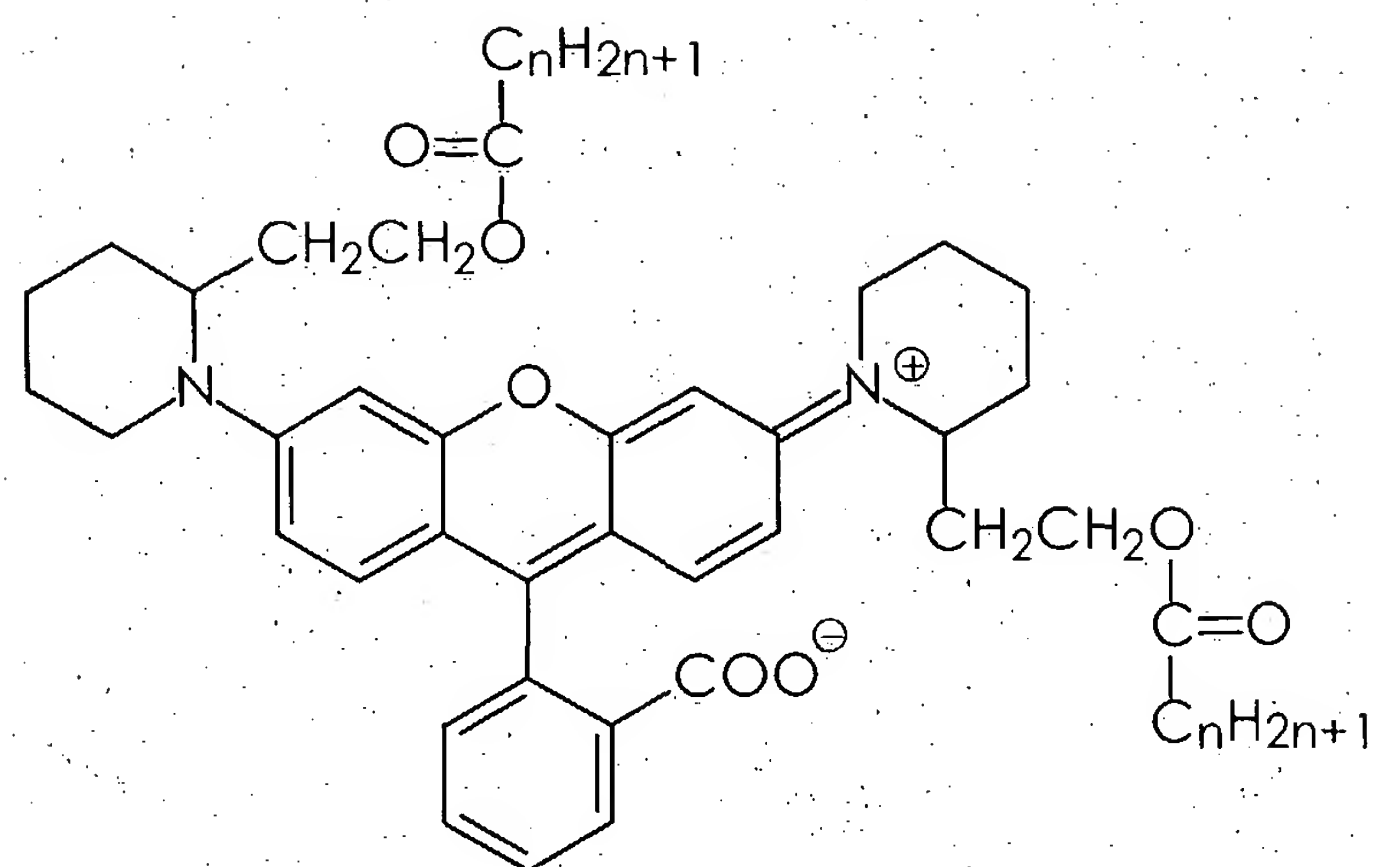


wherein n is at least about 12.

104. A phase change ink composition according to claim 1 wherein the colorant is of the formula

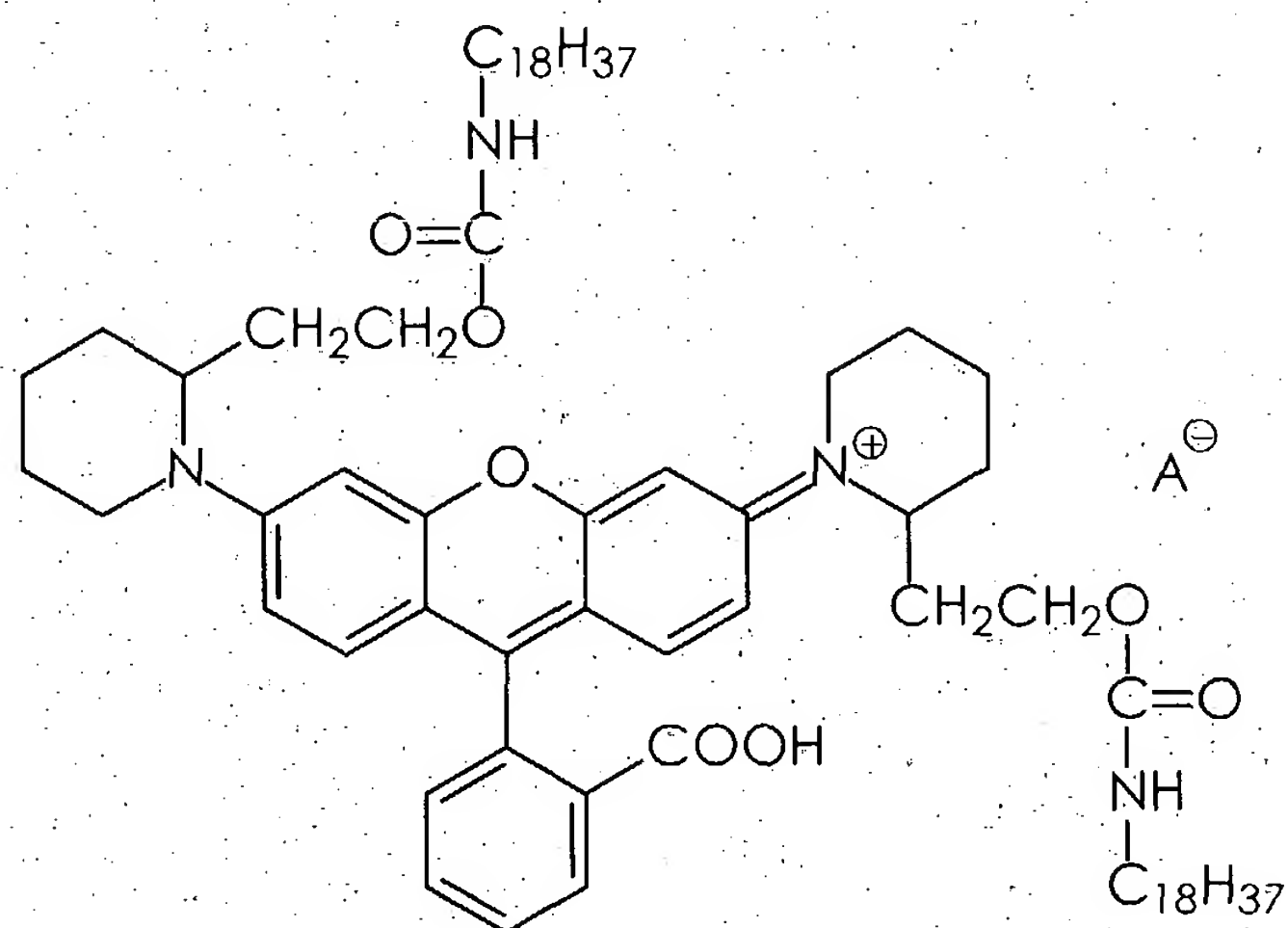


or

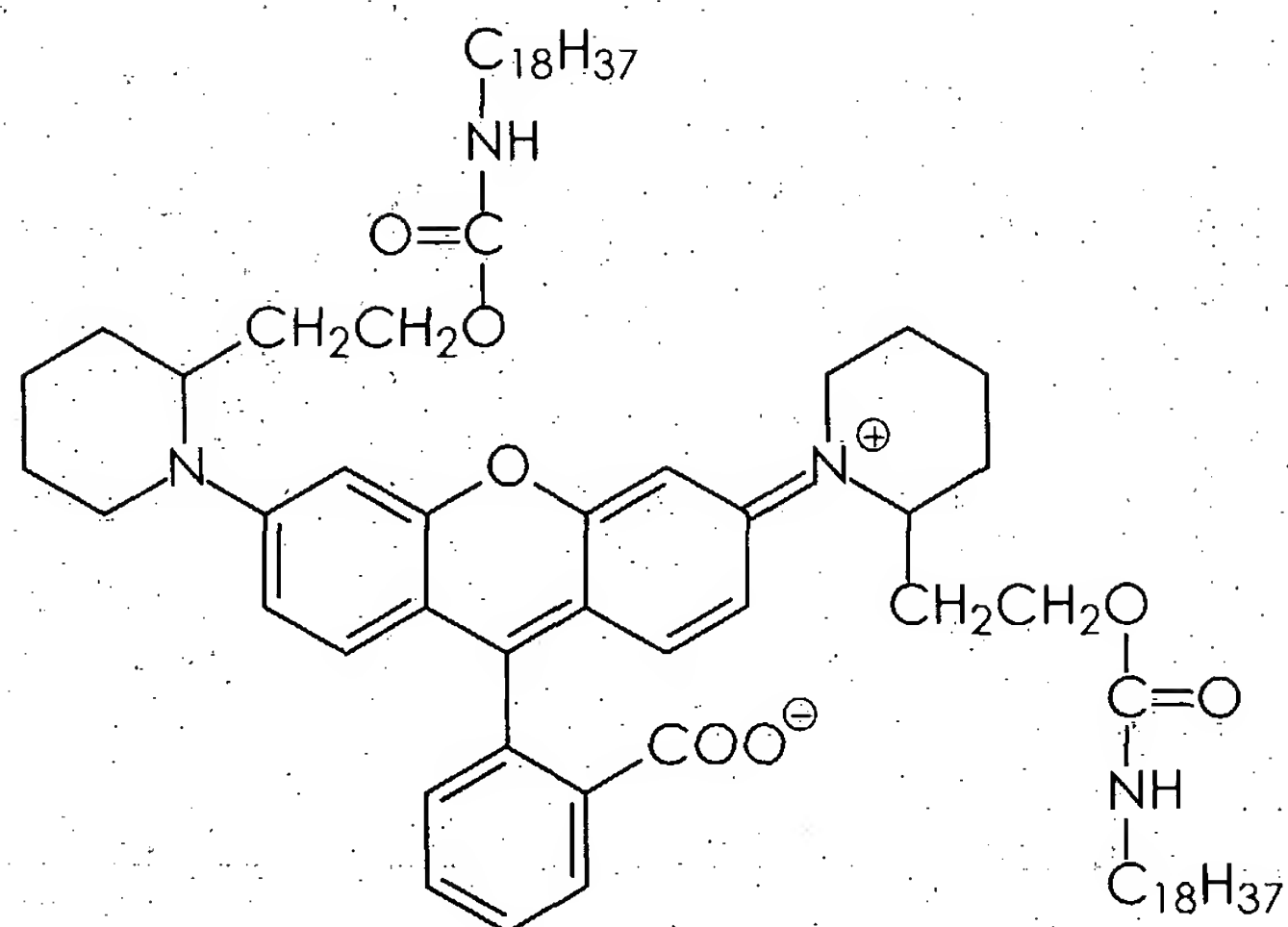


wherein n is at least about 12.

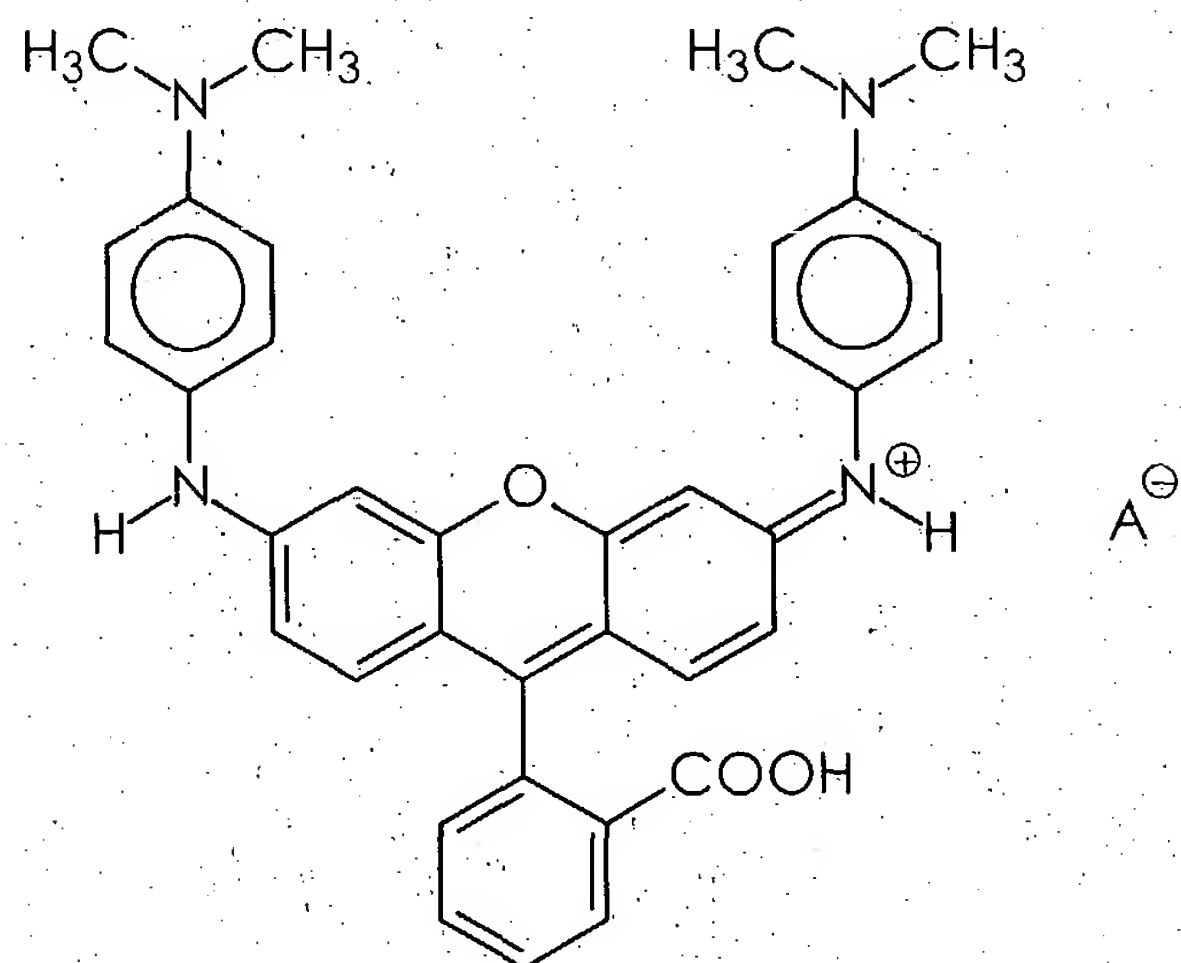
105. A phase change ink composition according to claim 1 wherein the colorant is of the formula



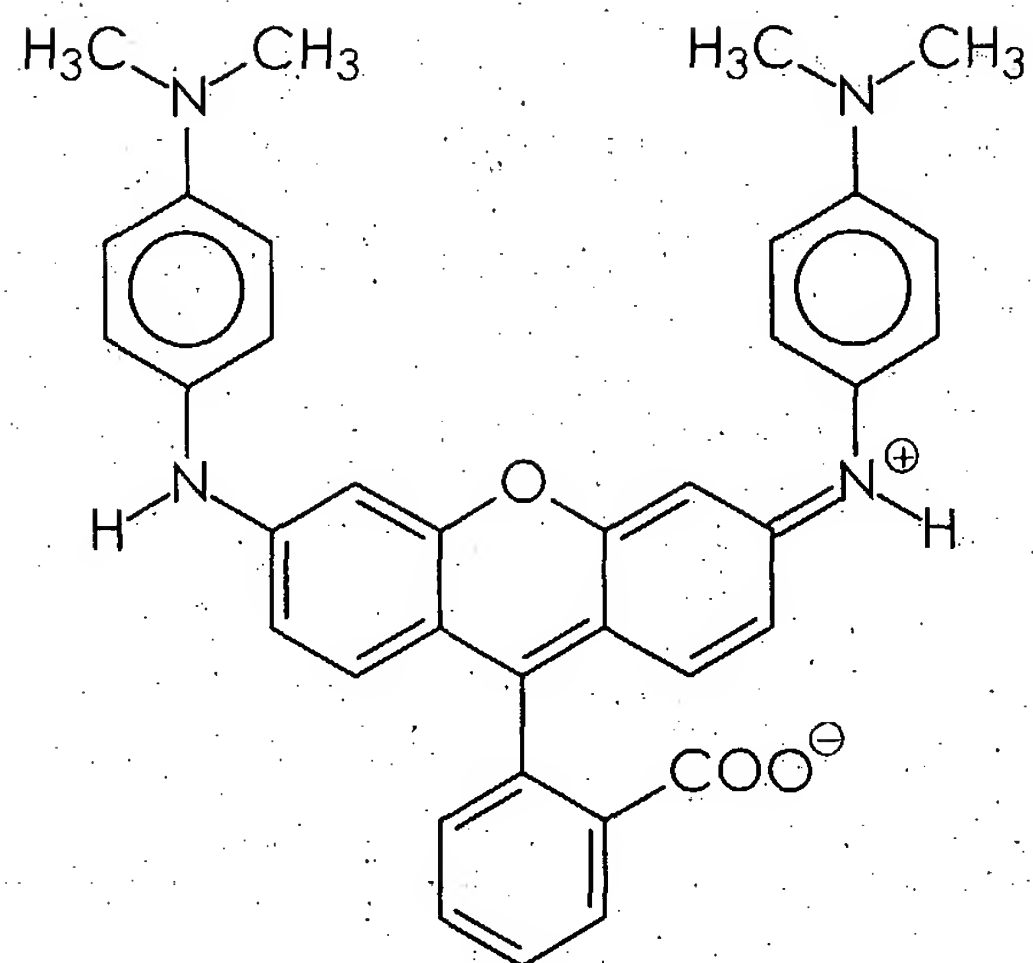
or



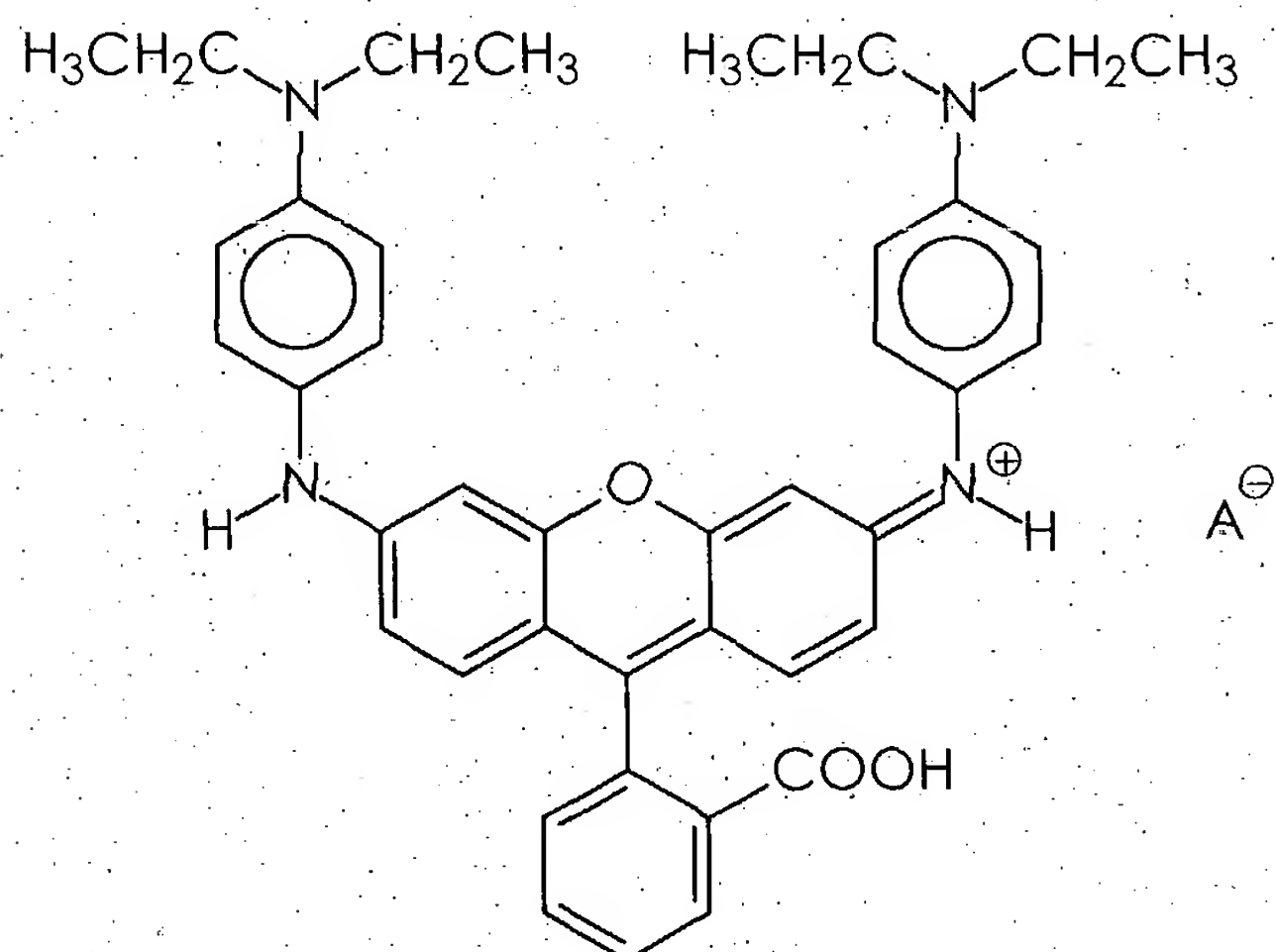
106. A phase change ink composition according to claim 1 wherein the colorant is of the formula



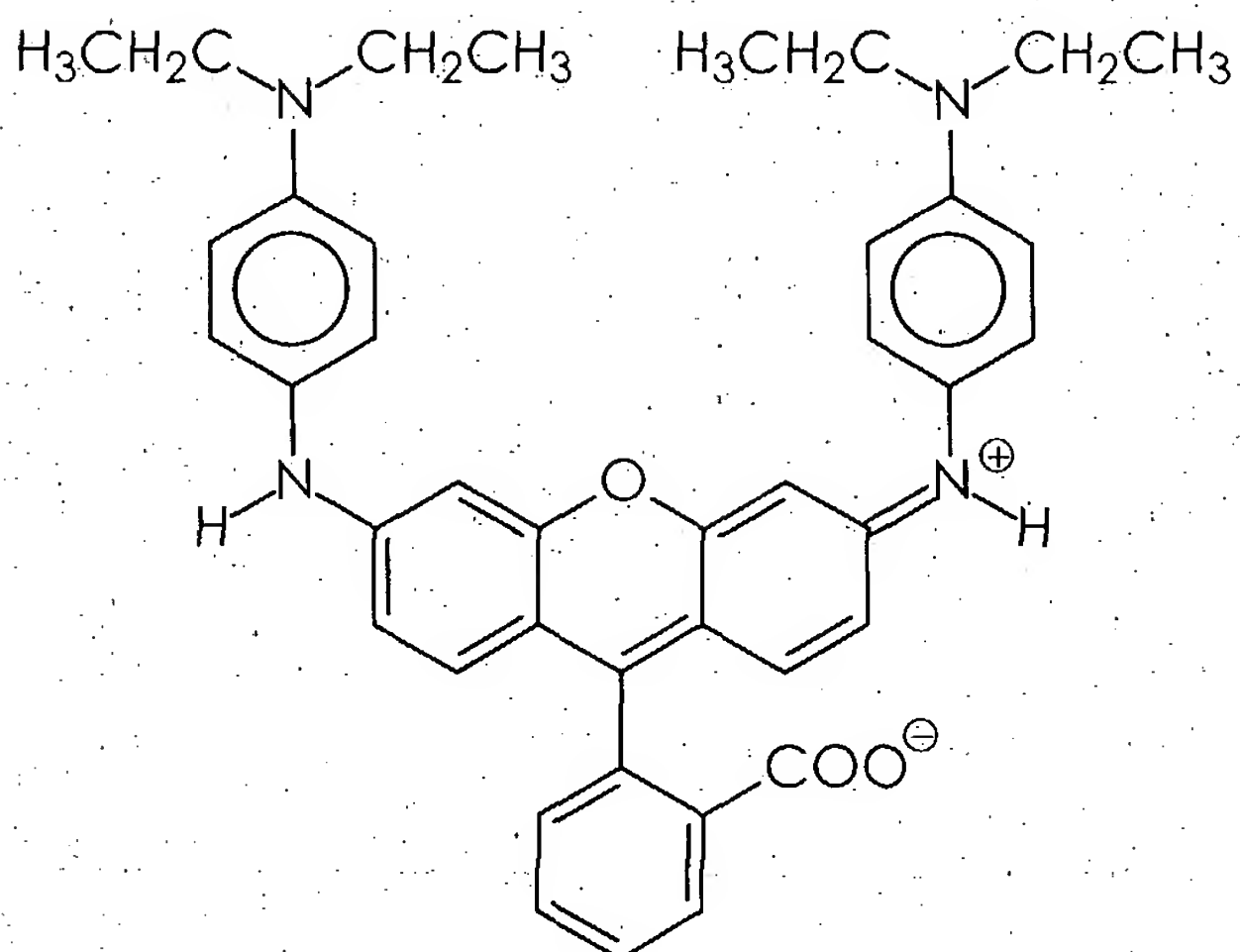
or



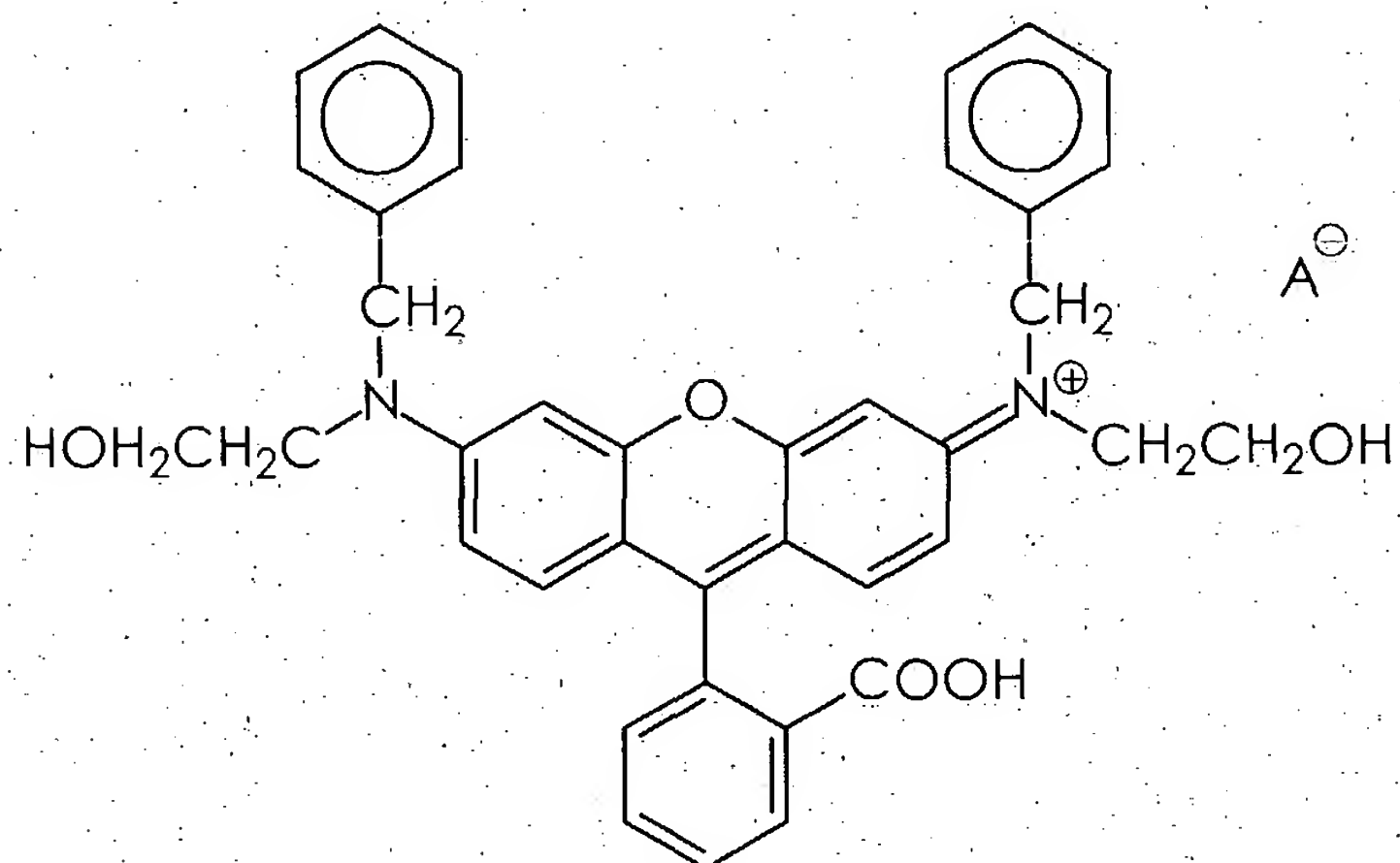
107. A phase change ink composition according to claim 1 wherein the colorant is of the formula



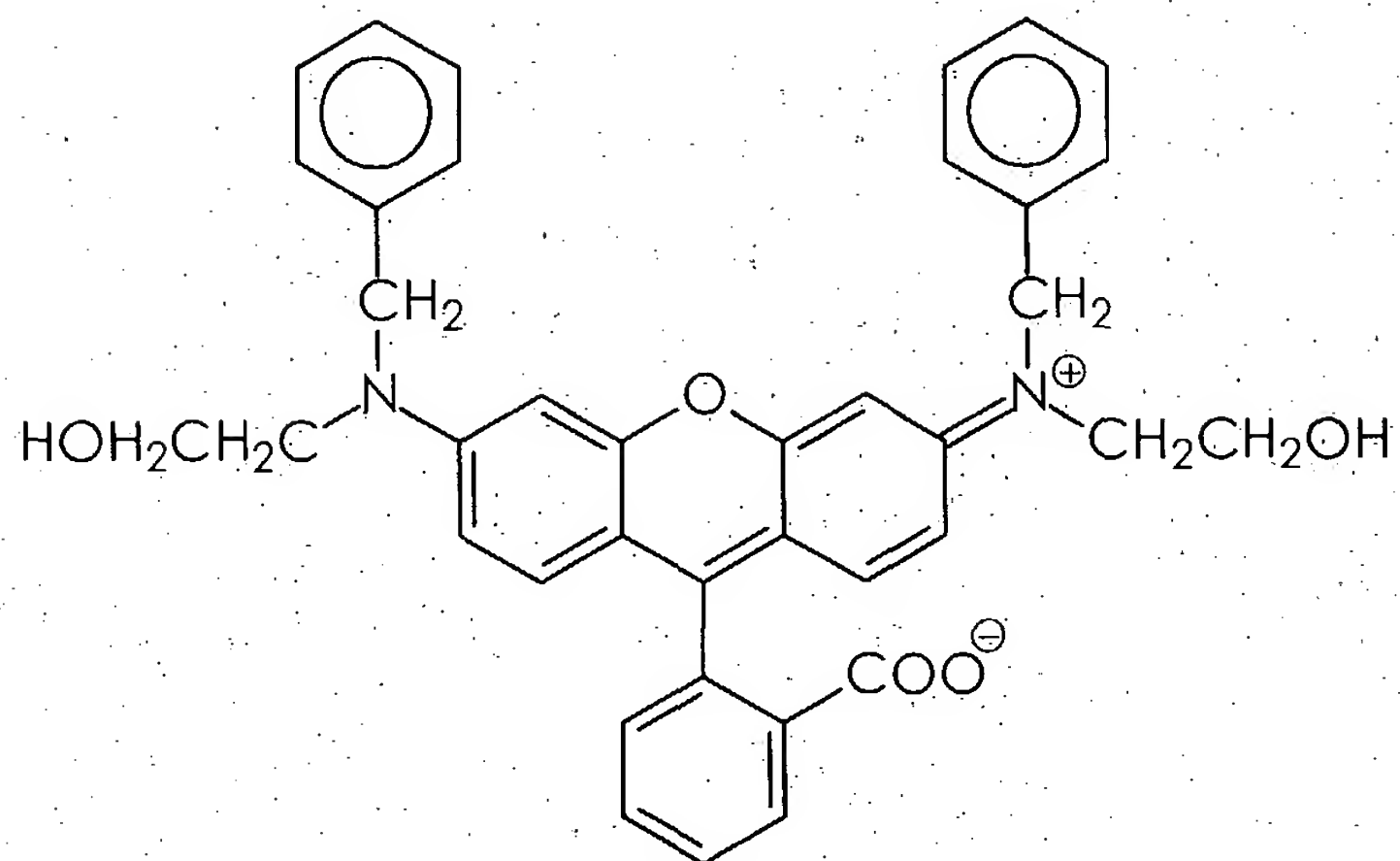
or



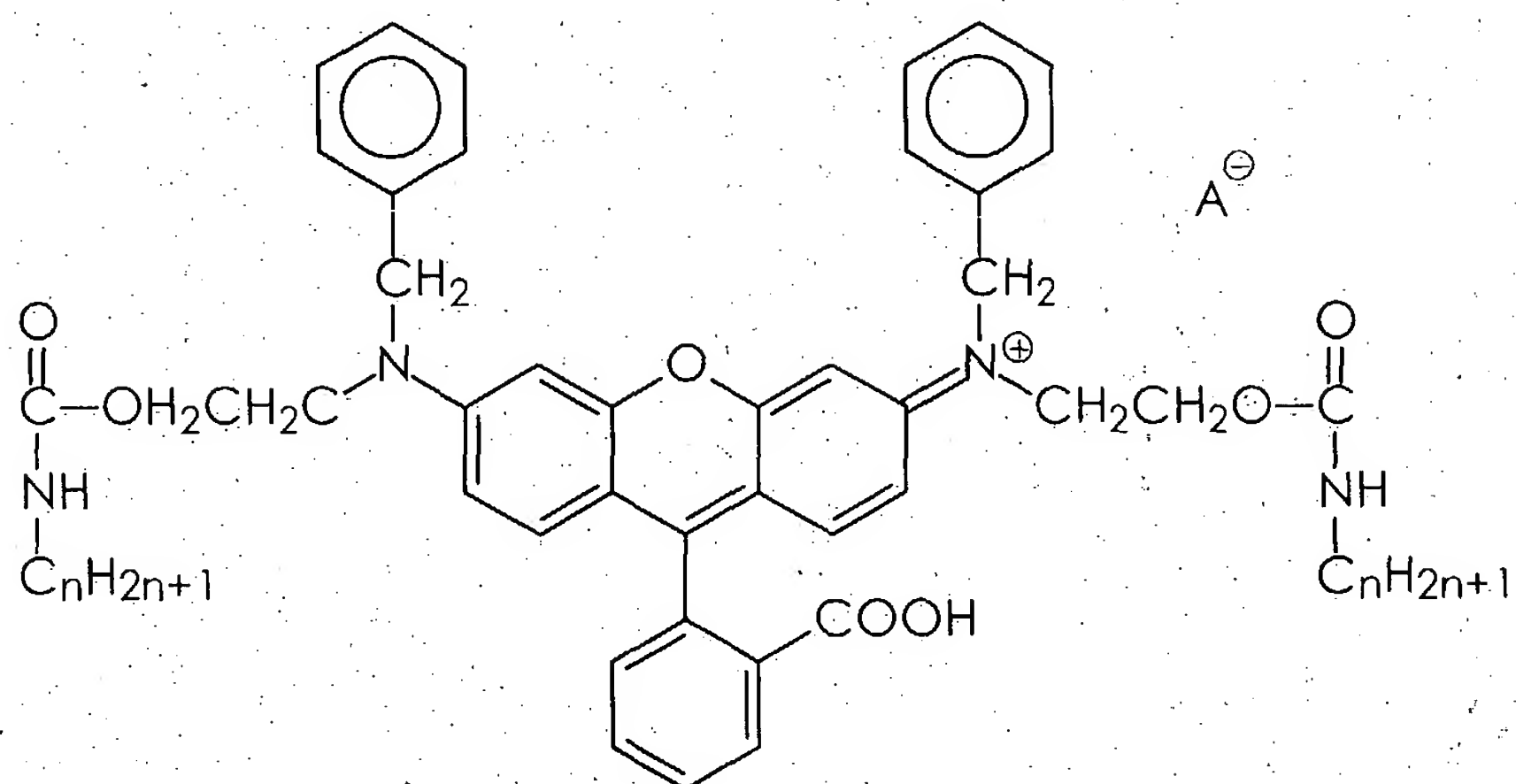
108. A phase change ink composition according to claim 1 wherein the colorant is of the formula



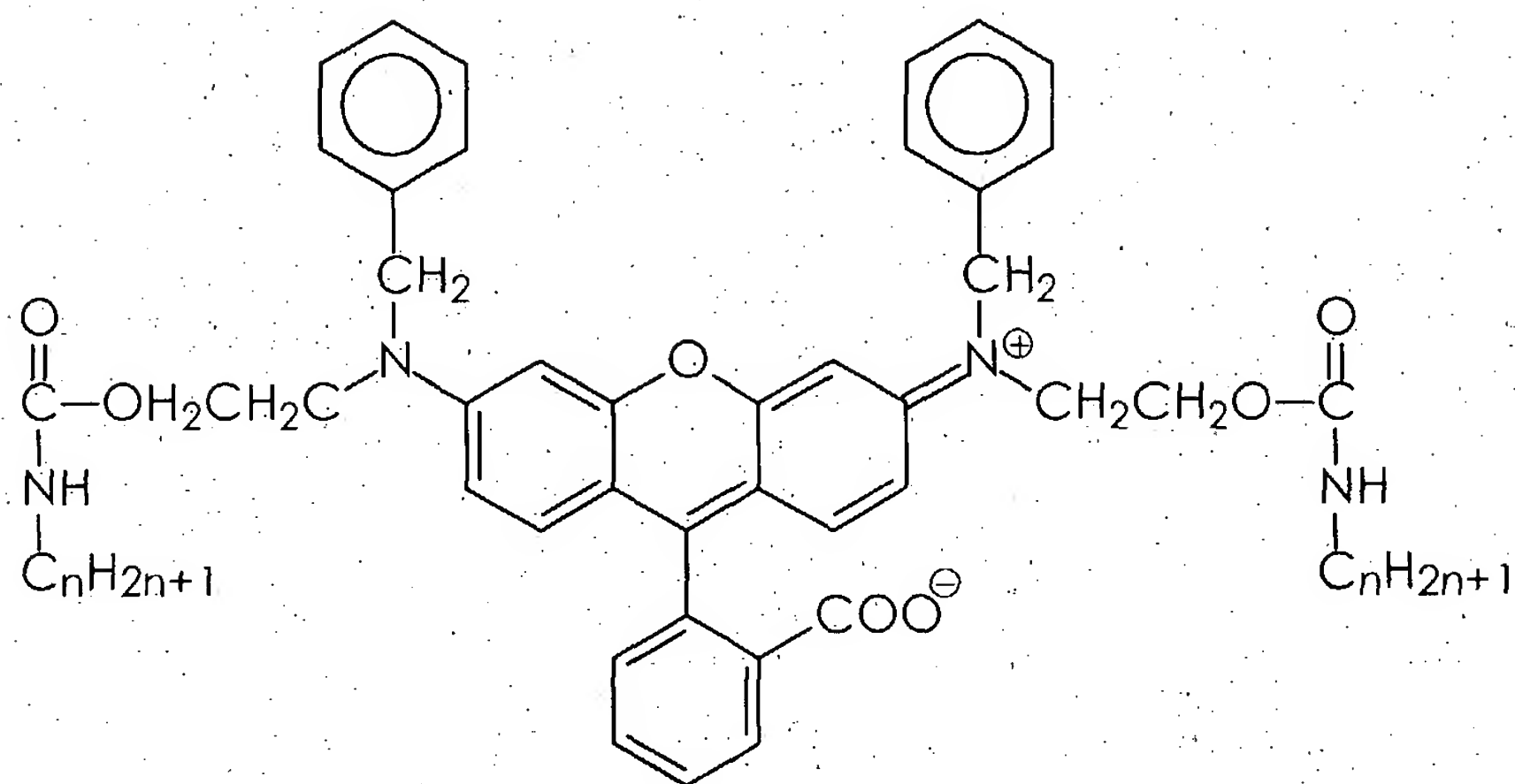
or



109. A phase change ink composition according to claim 1 wherein the colorant is of the formula

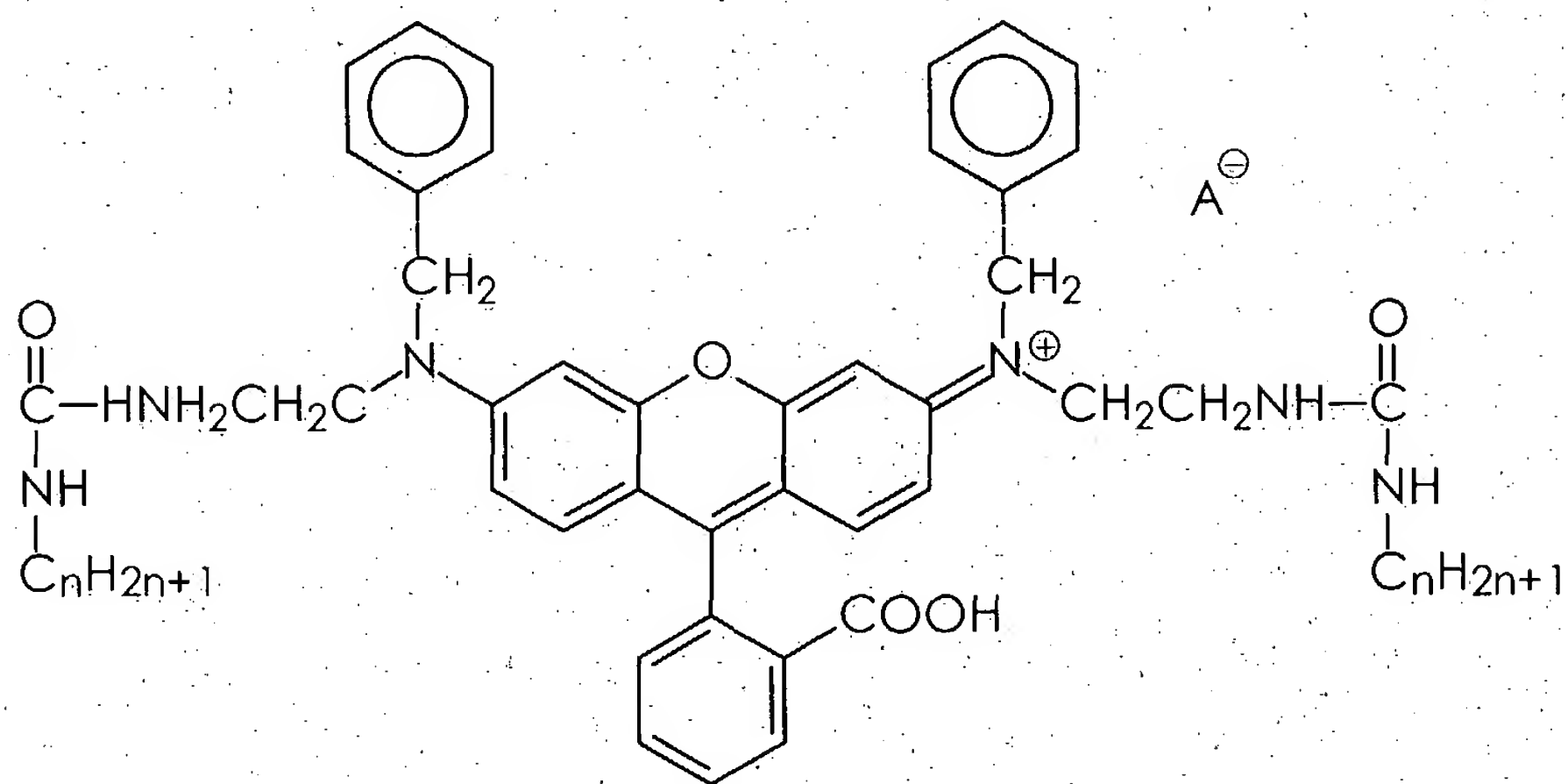


or

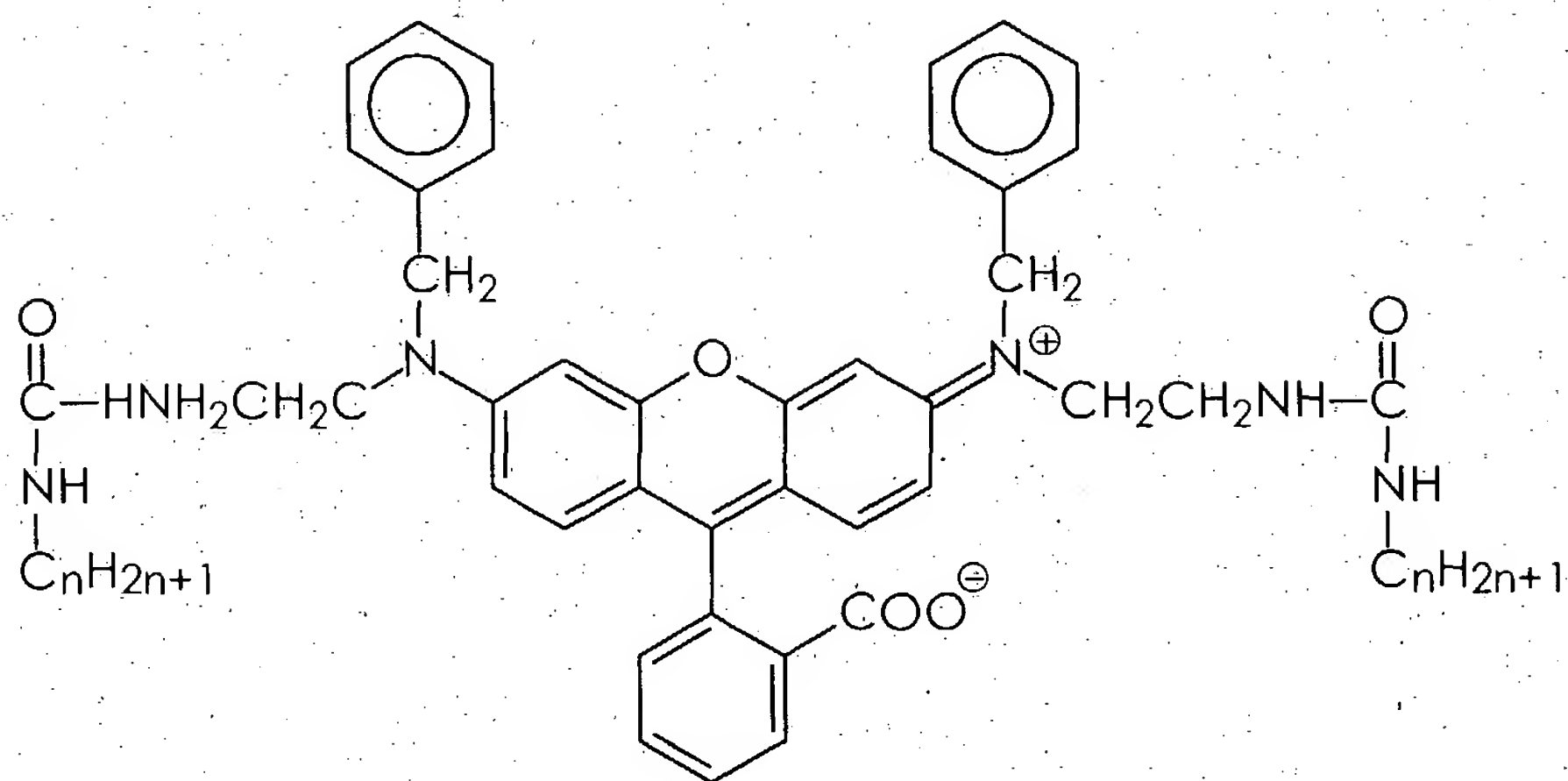


wherein n is at least about 12.

110. A phase change ink composition according to claim 1 wherein the colorant is of the formula

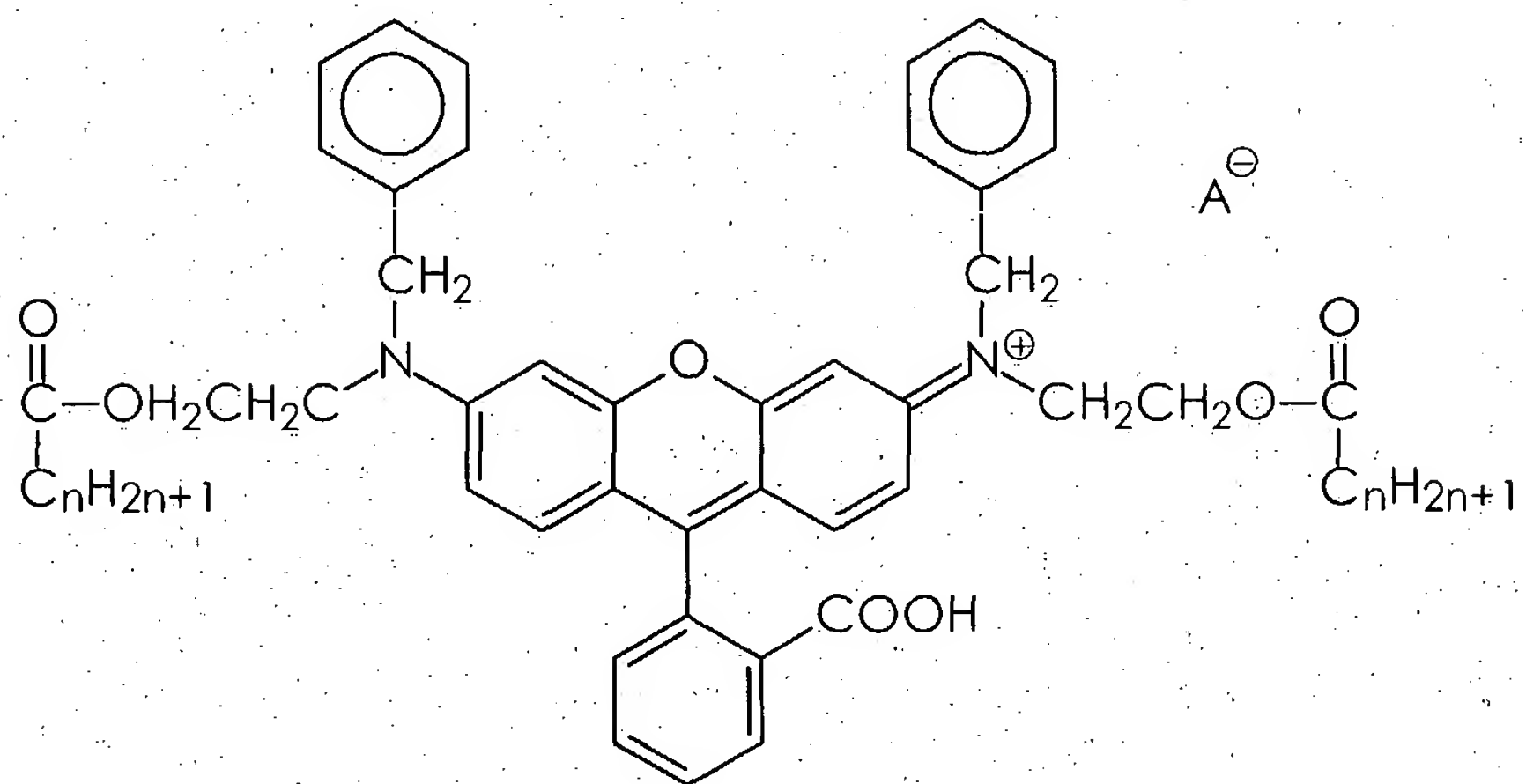


or

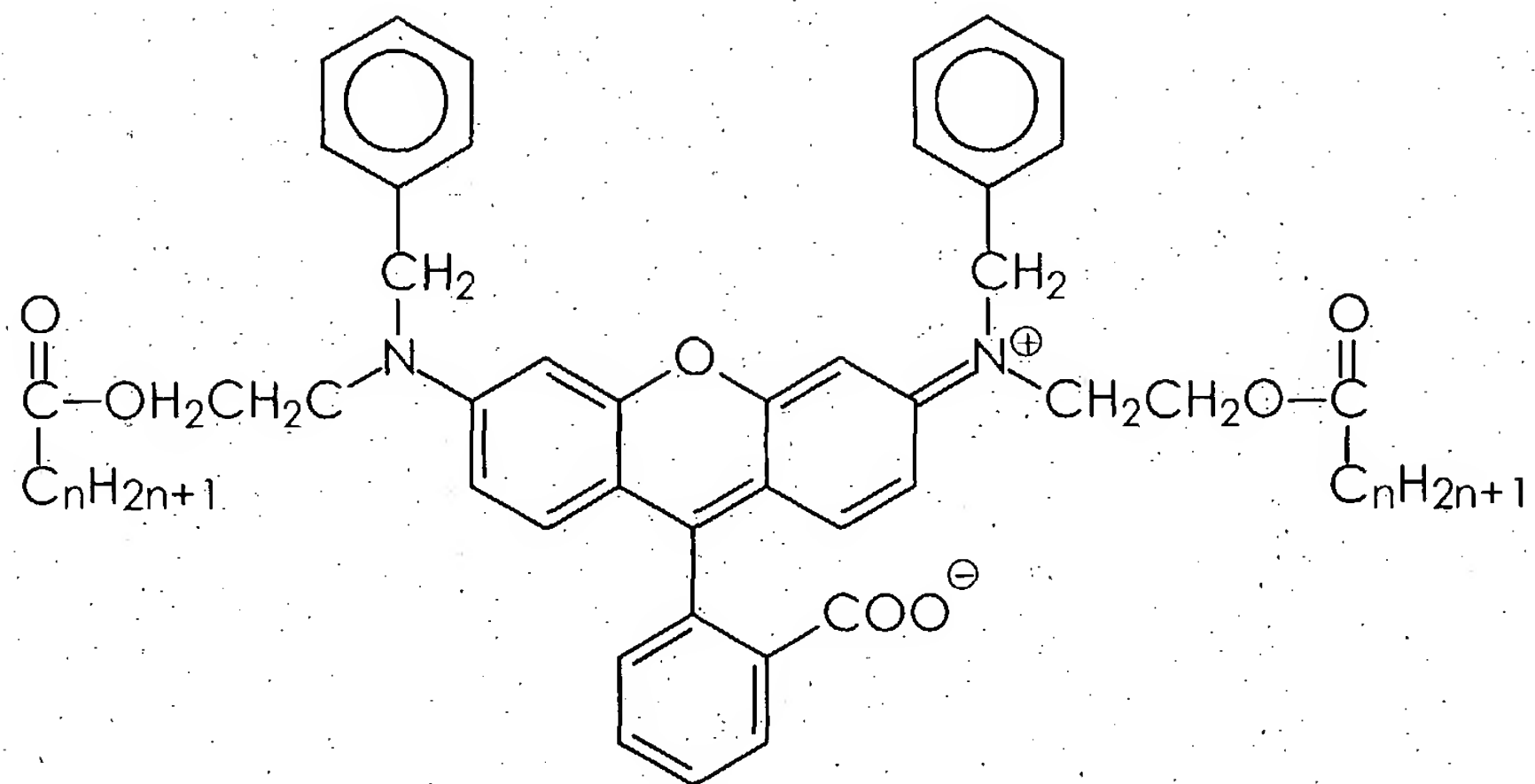


wherein n is at least about 12.

111. A phase change ink composition according to claim 1 wherein the colorant is of the formula

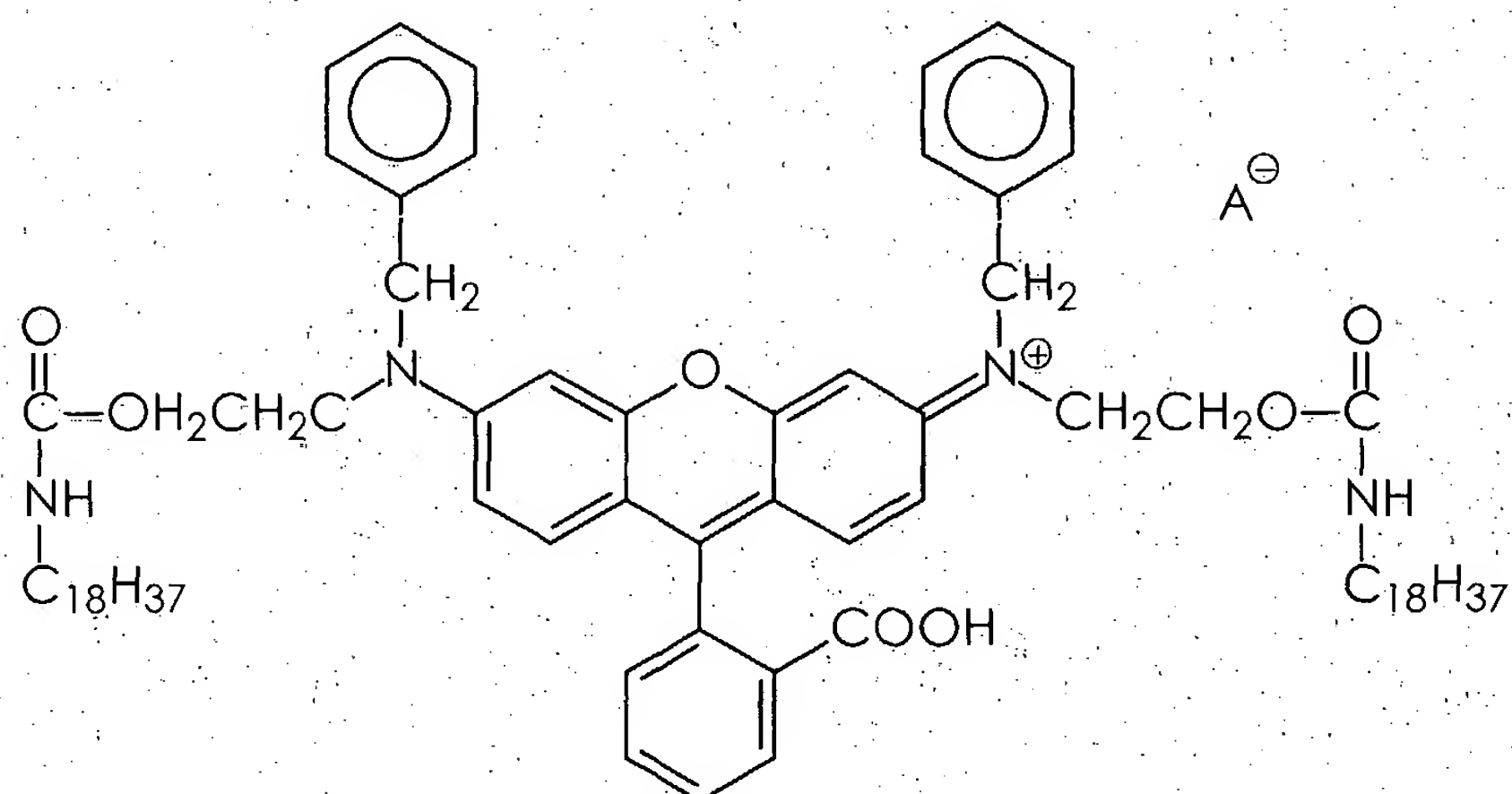


or

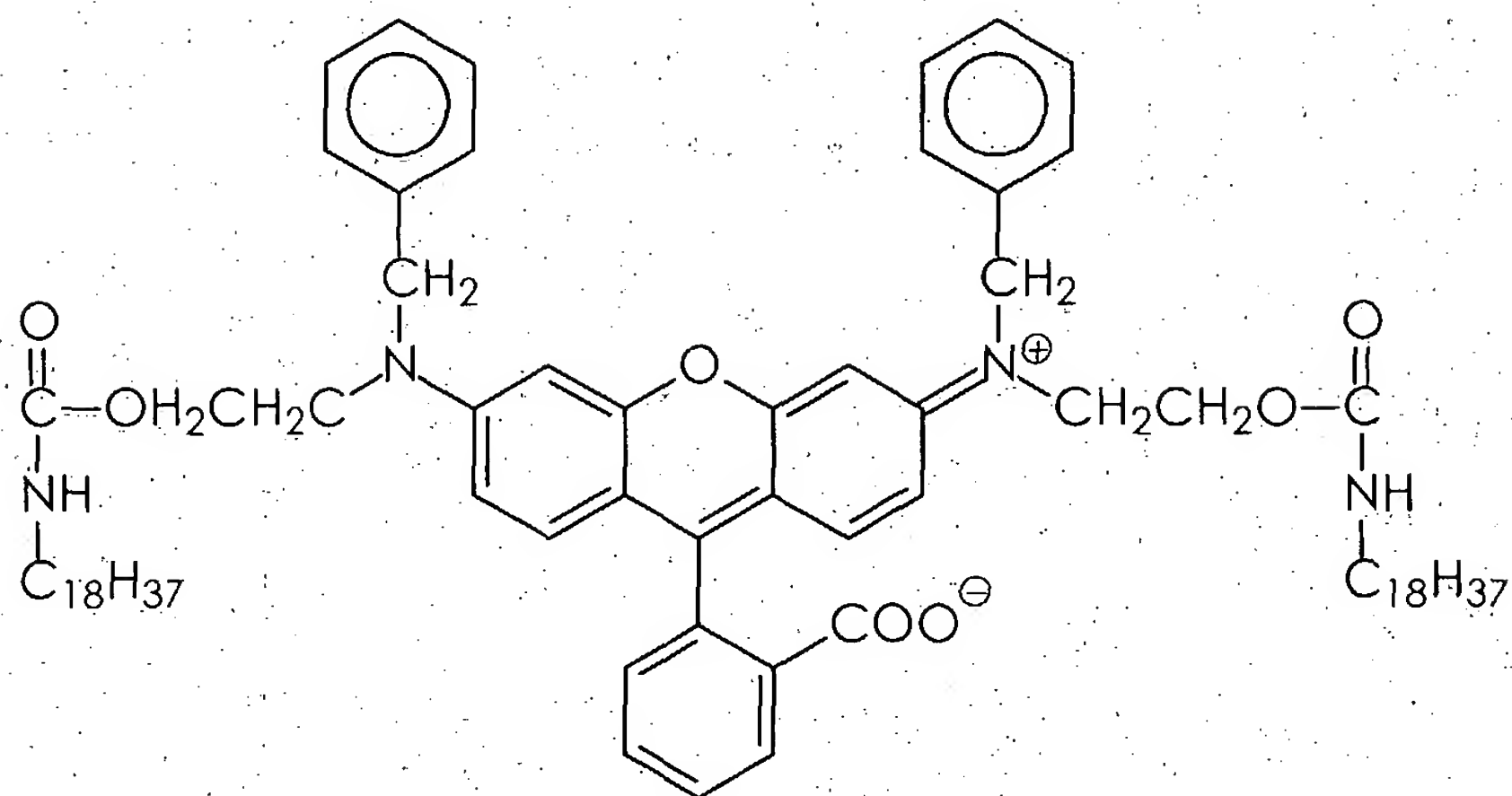


wherein n is at least about 12.

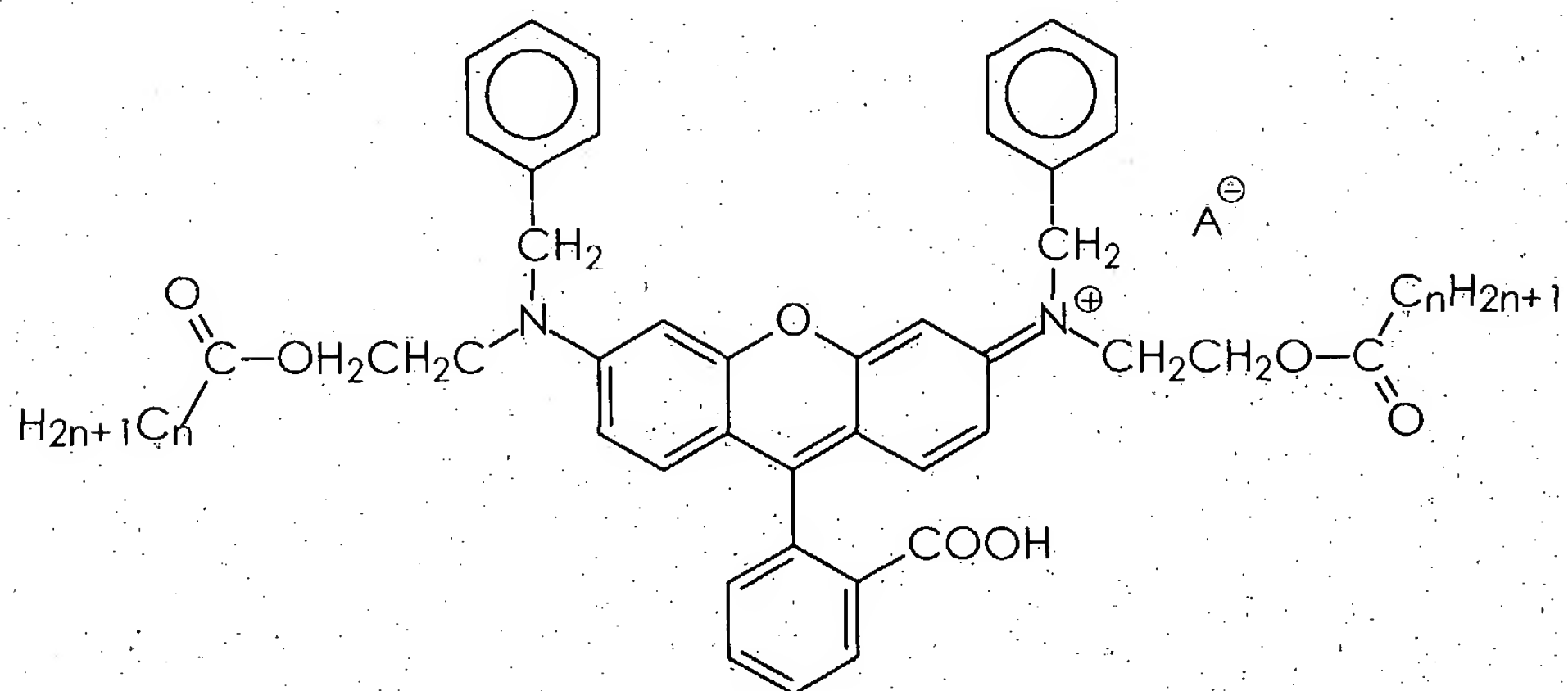
112. A phase change ink composition according to claim 1 wherein the colorant is of the formula



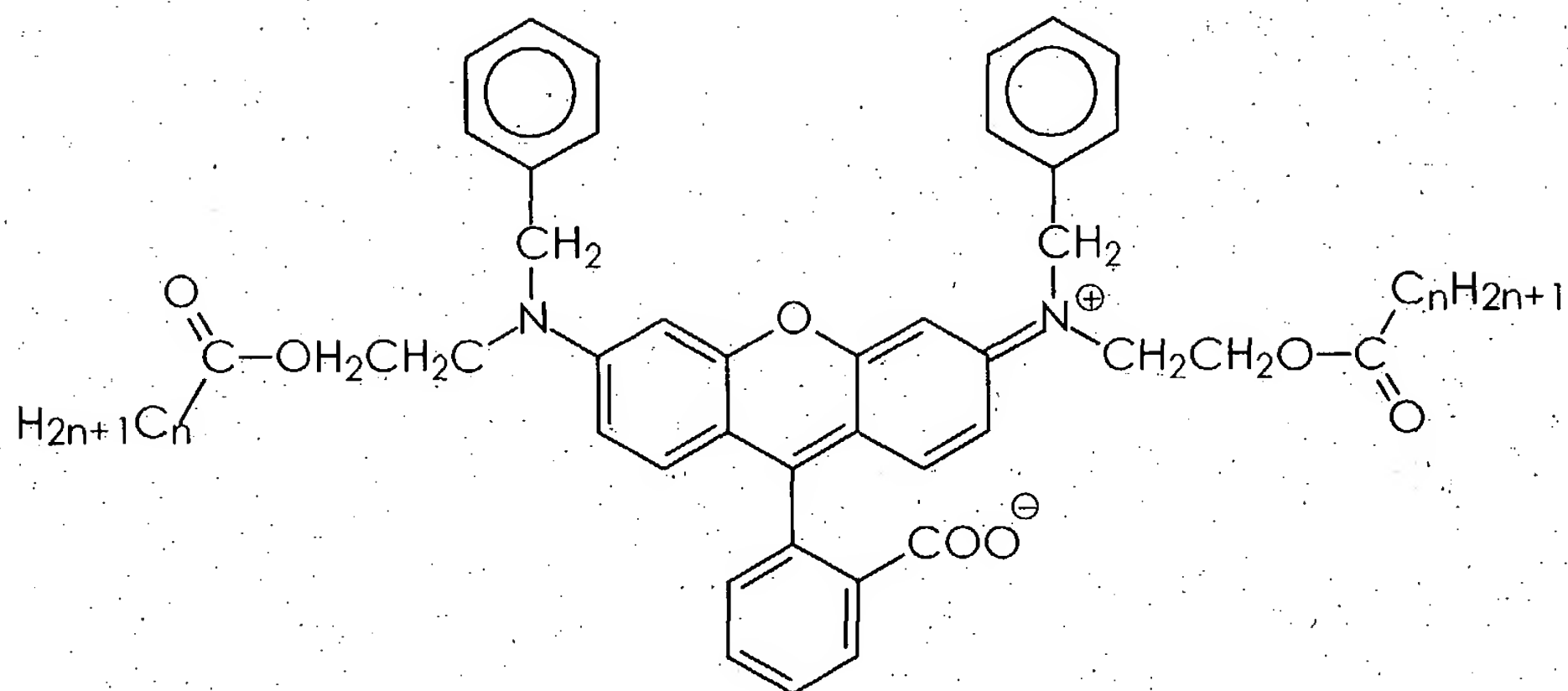
or



113. A phase change ink composition according to claim 1 wherein the colorant is of the formula

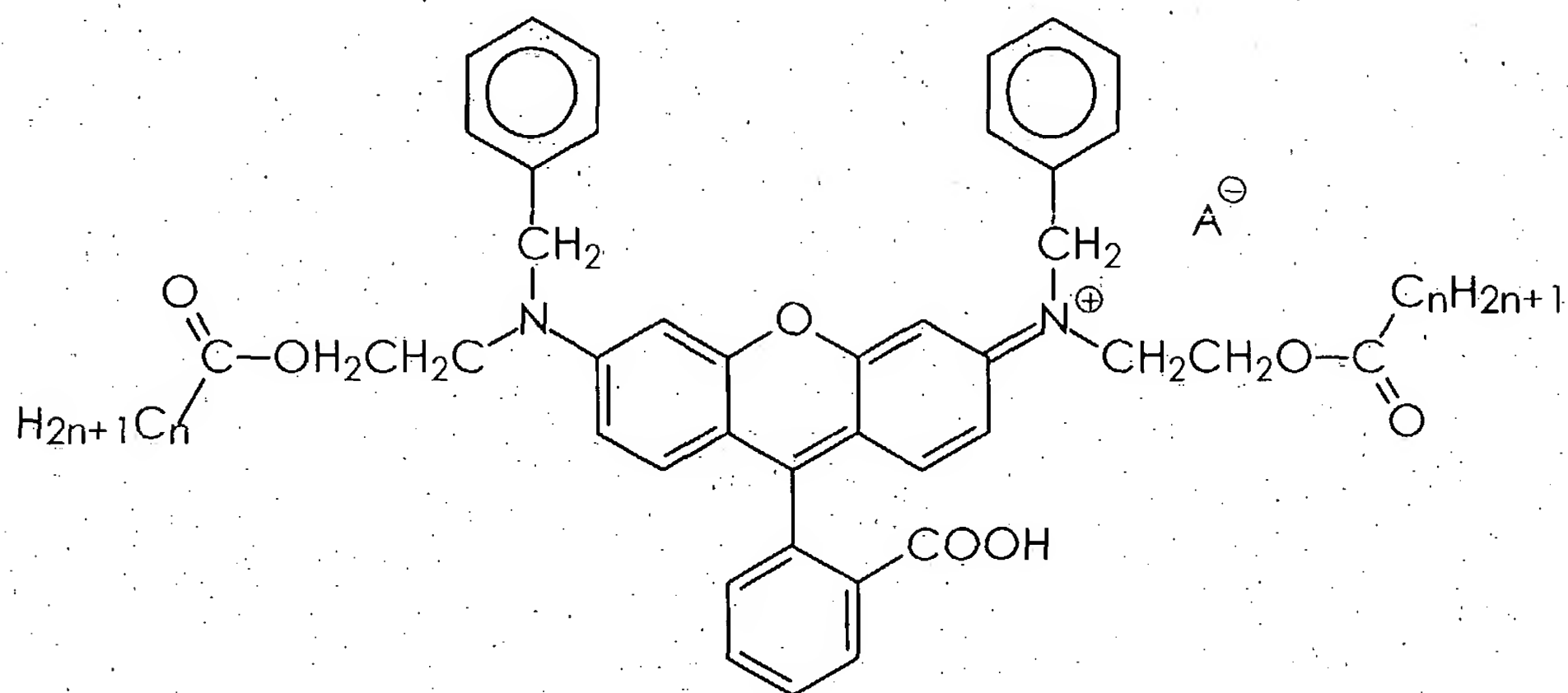


or

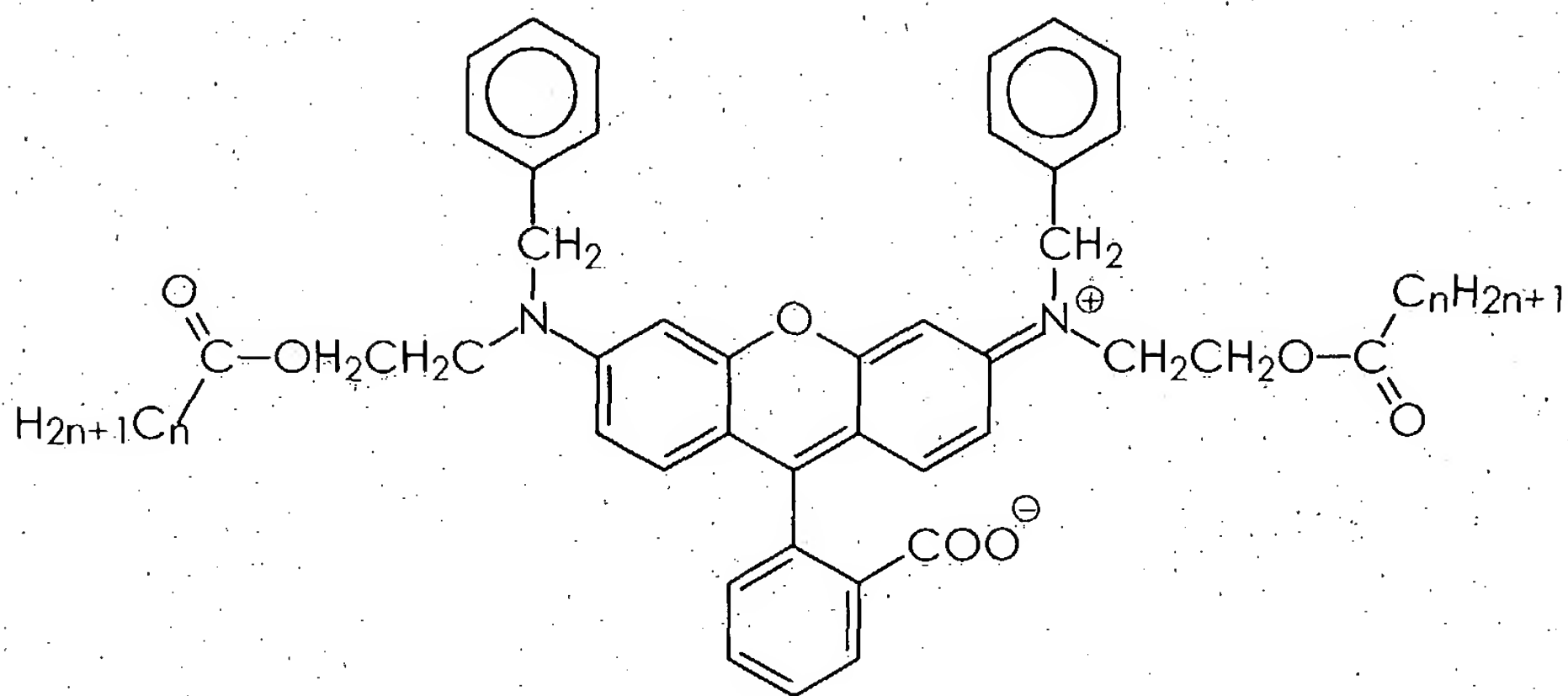


wherein n is at least about 12.

114. A phase change ink composition according to claim 1 wherein the colorant is of the formula

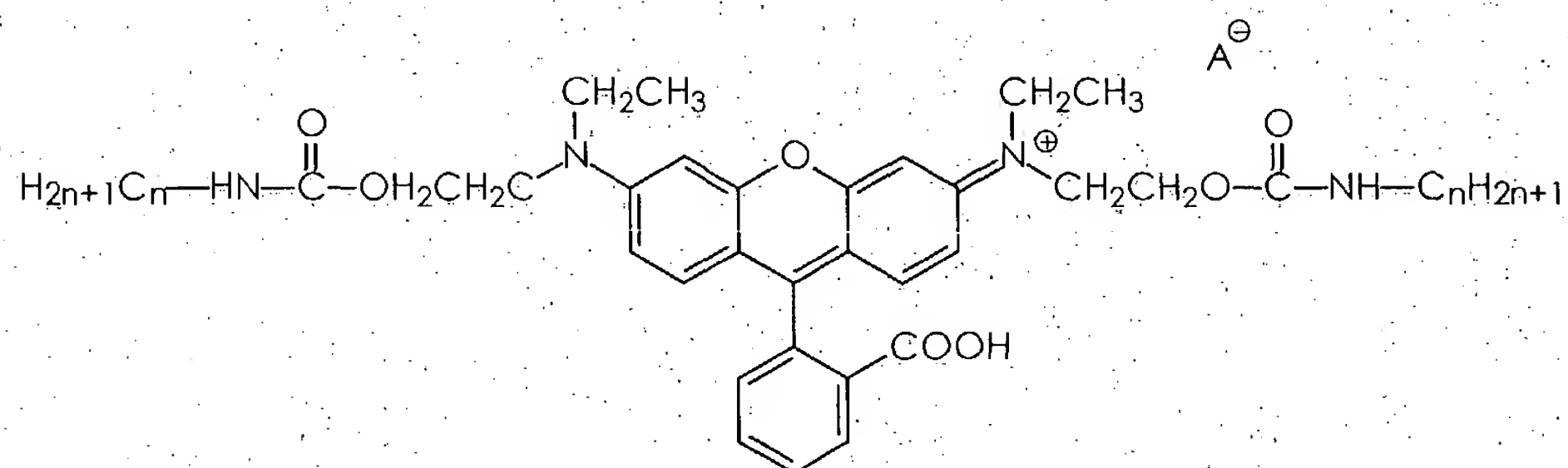


or

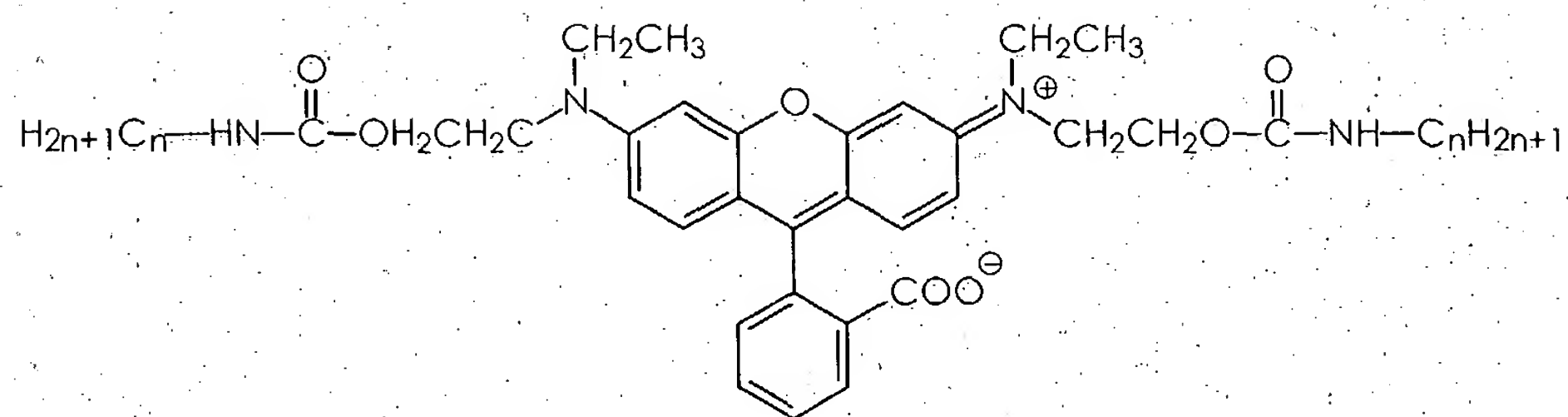


wherein n has an average value of about 50.

115. A phase change ink composition according to claim 1 wherein the colorant is of the formula

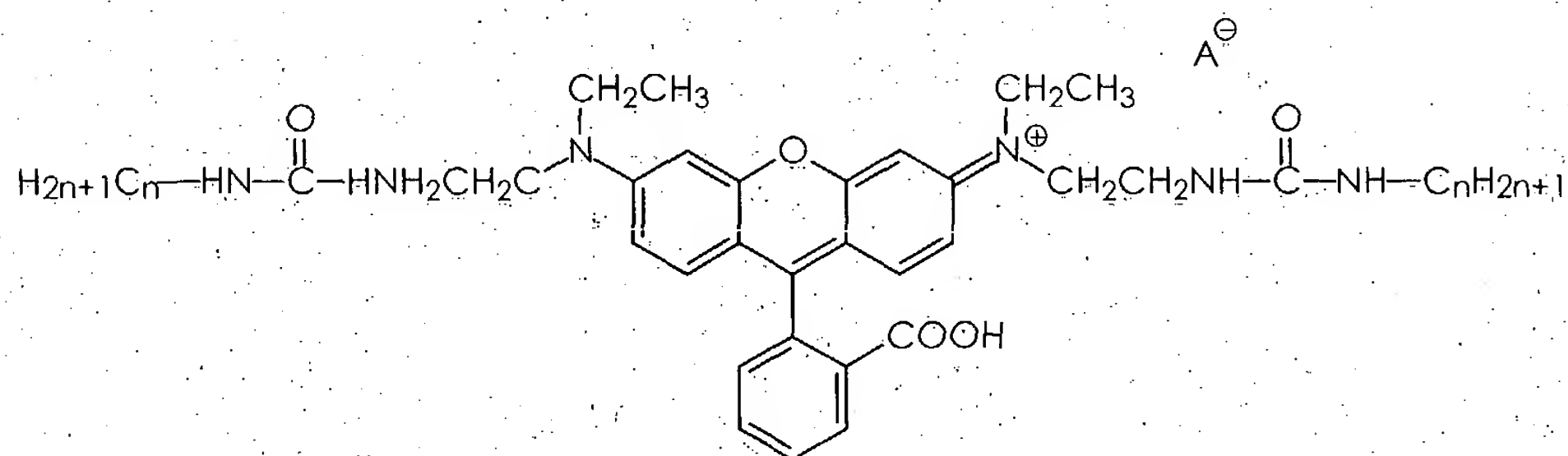


or

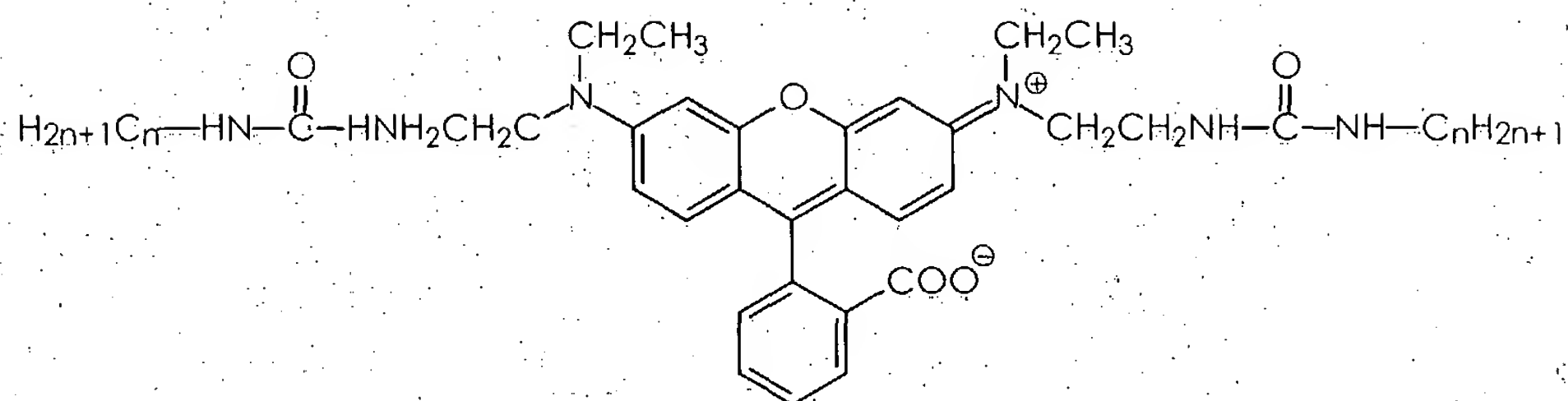


wherein n is at least about 12.

116. A phase change ink composition according to claim 1 wherein the colorant is of the formula

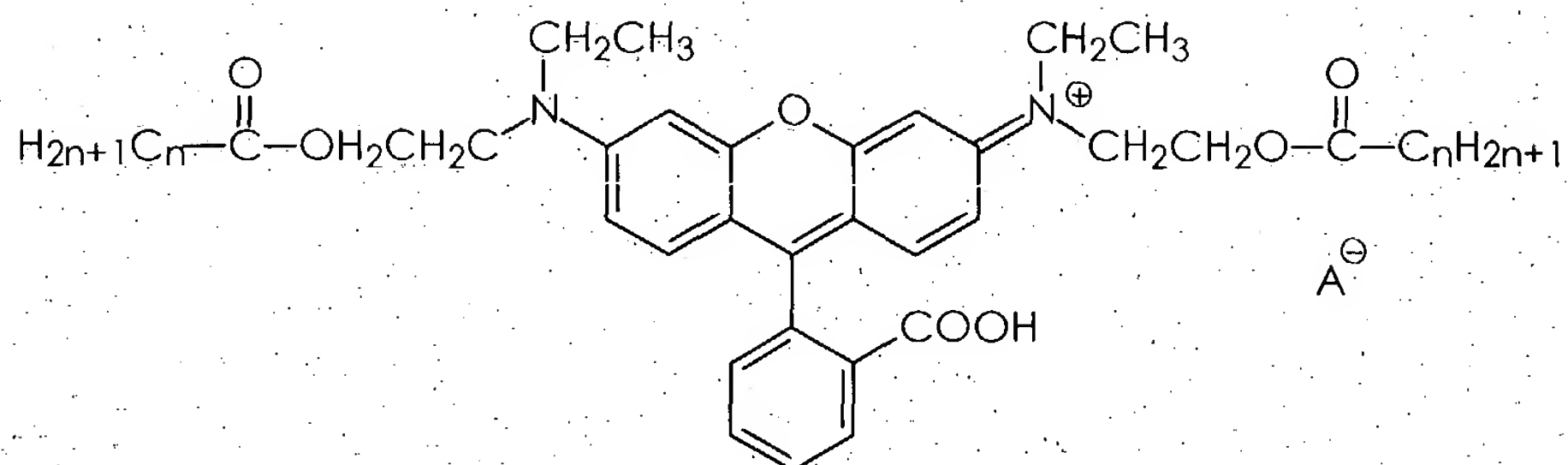


or

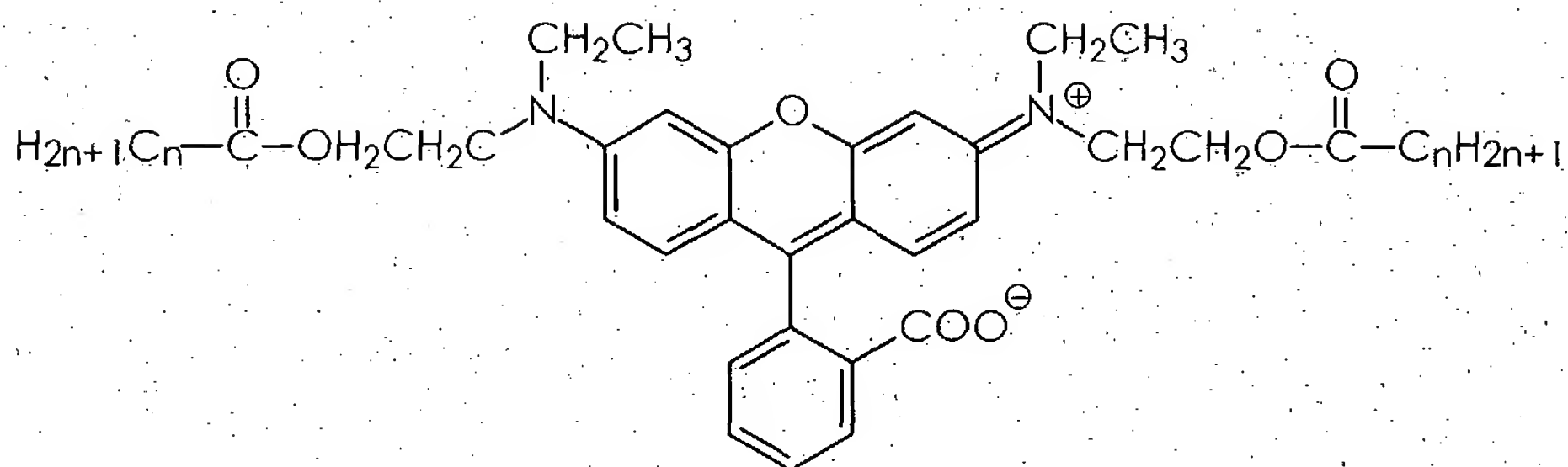


wherein n is at least about 12.

117. A phase change ink composition according to claim 1 wherein the colorant is of the formula

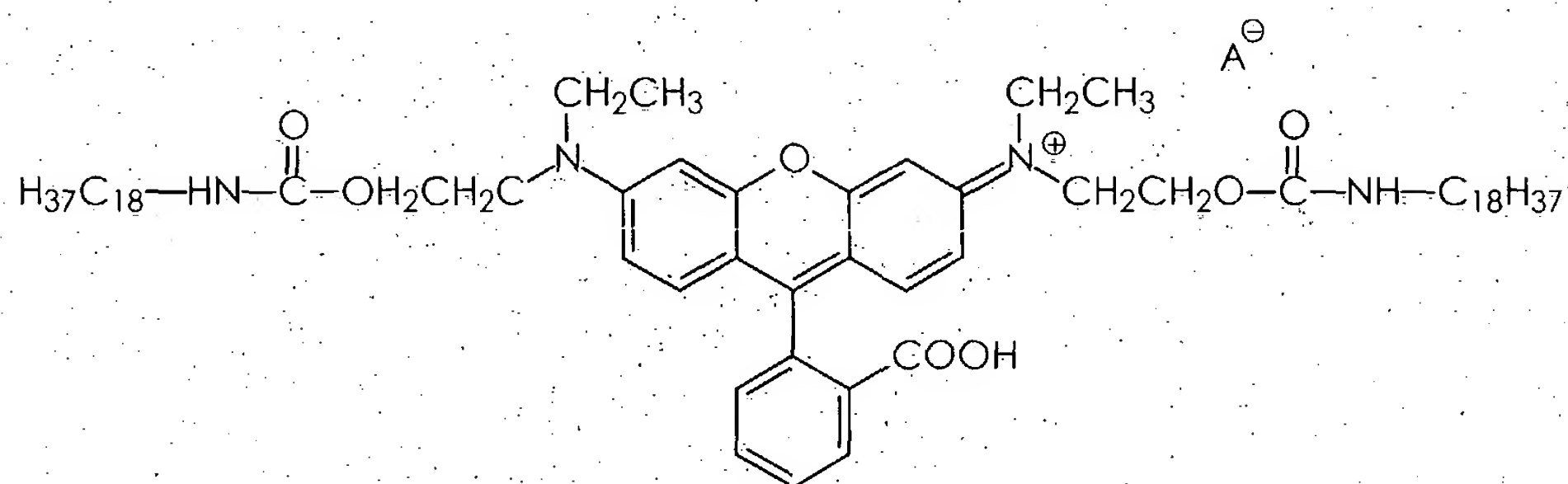


or

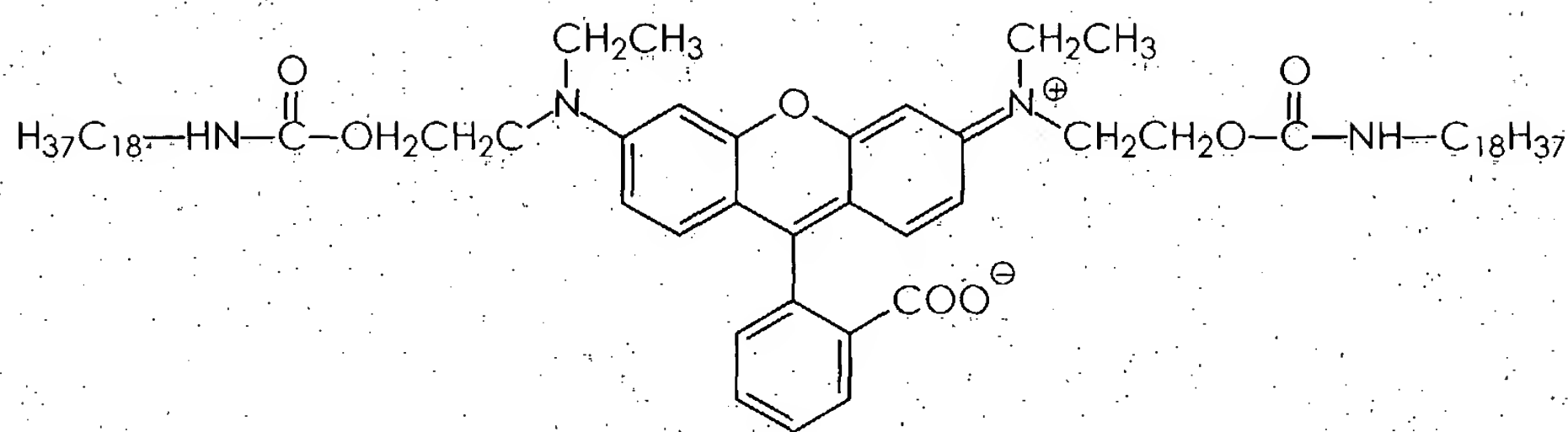


wherein n is at least about 12.

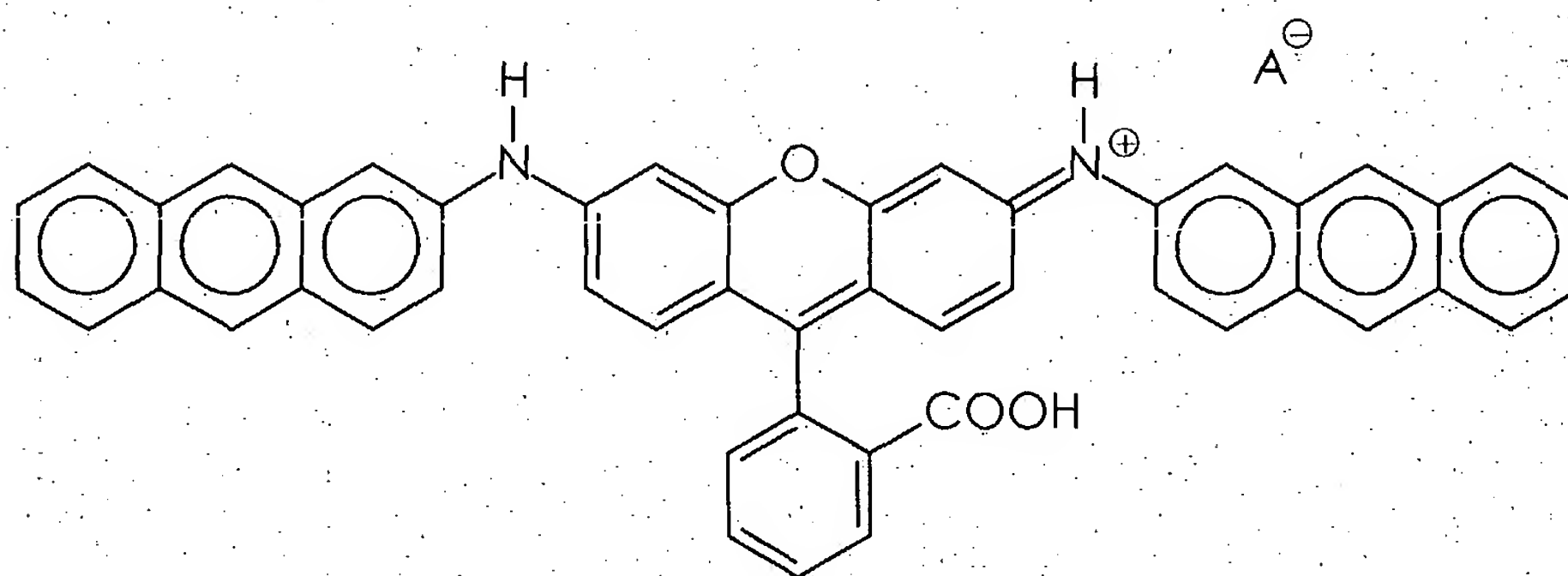
118. A phase change ink composition according to claim 1 wherein the colorant is of the formula



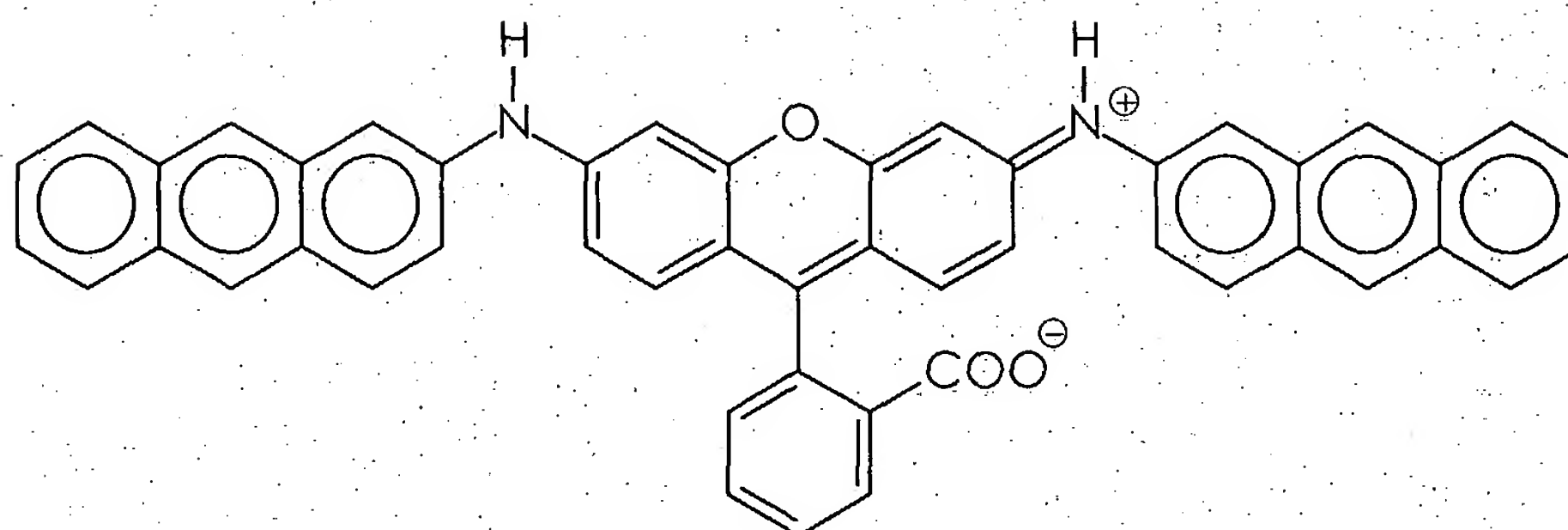
or



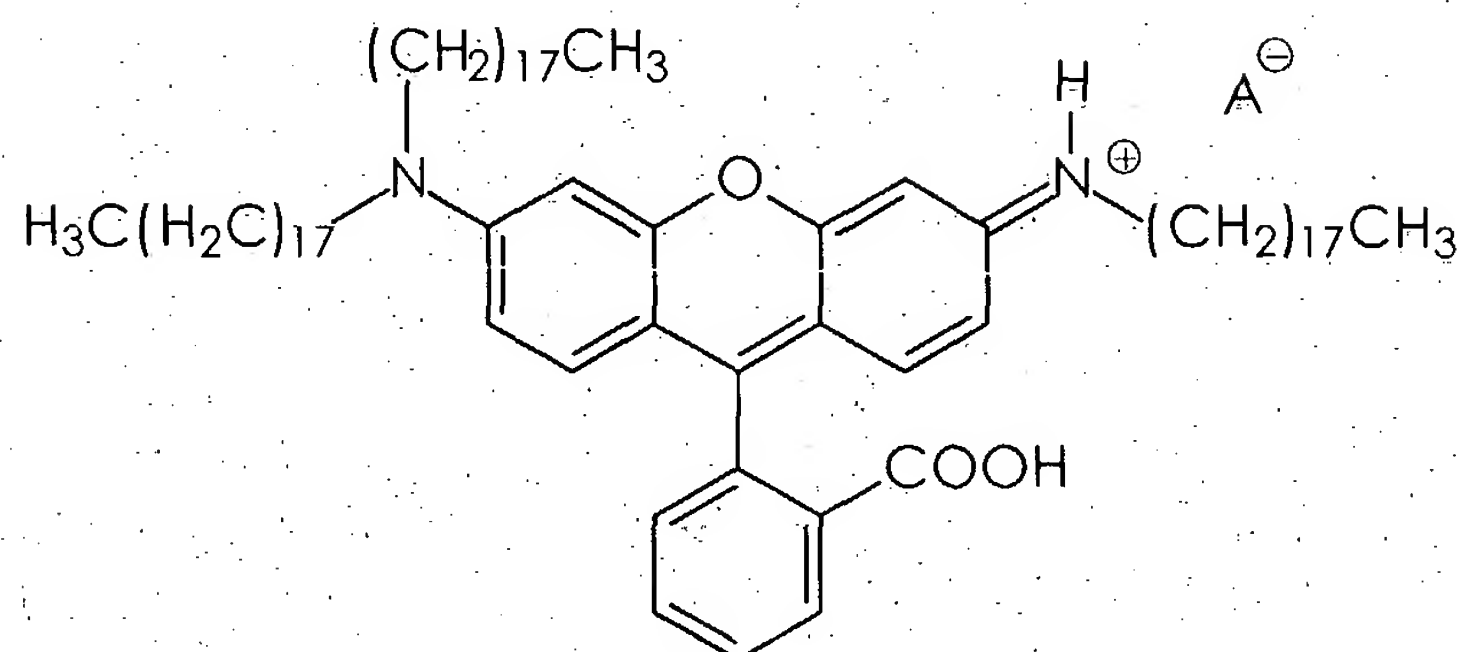
119. A phase change ink composition according to claim 1 wherein the colorant is of the formula



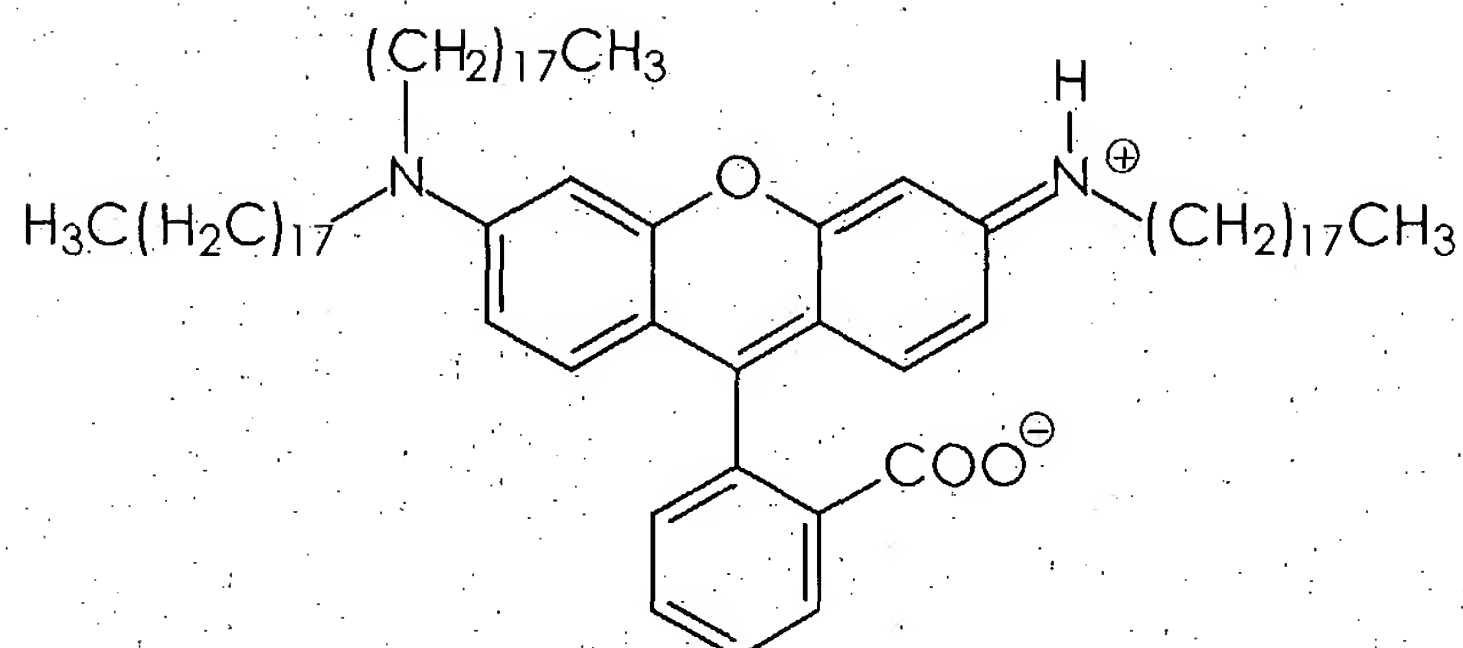
or



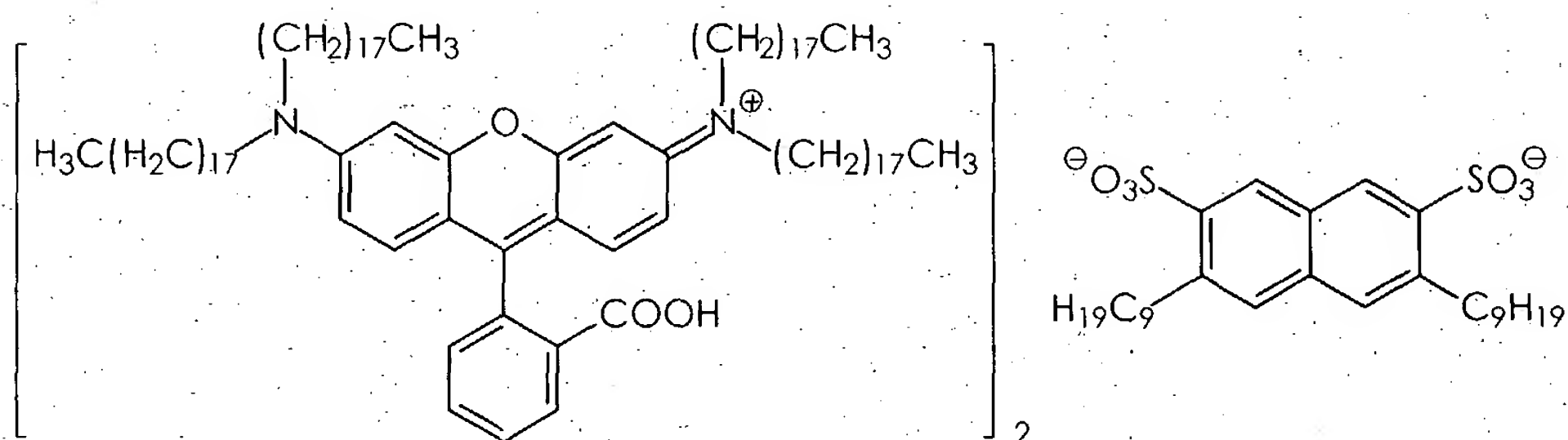
120. A phase change ink composition according to claim 1 wherein the colorant is of the formula



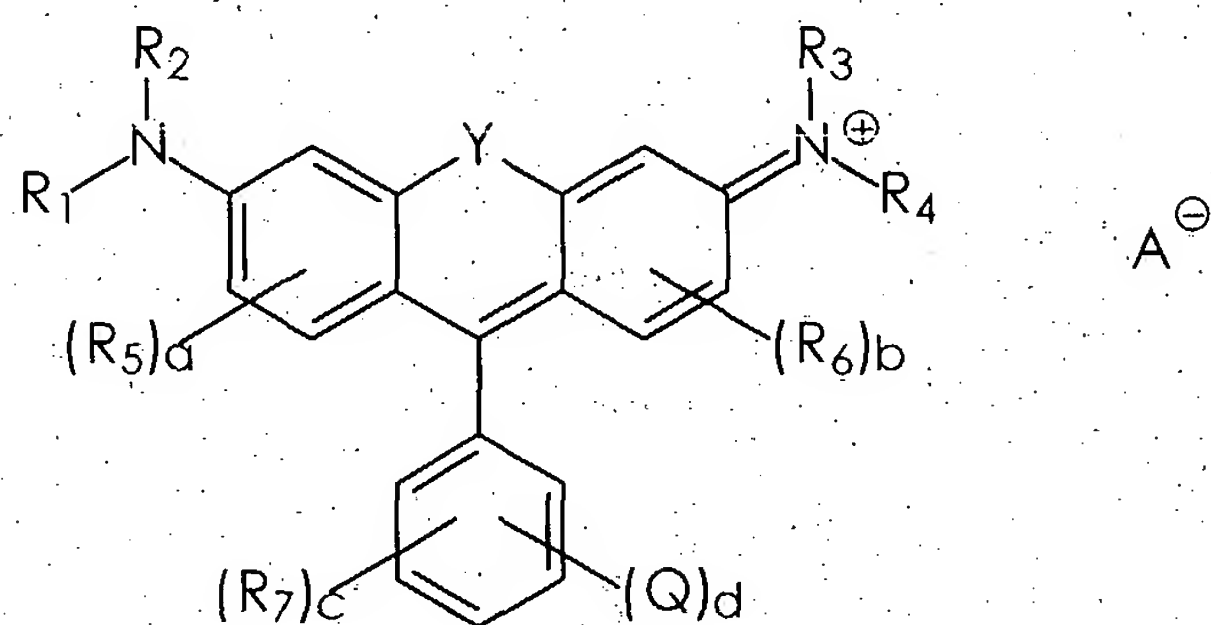
or



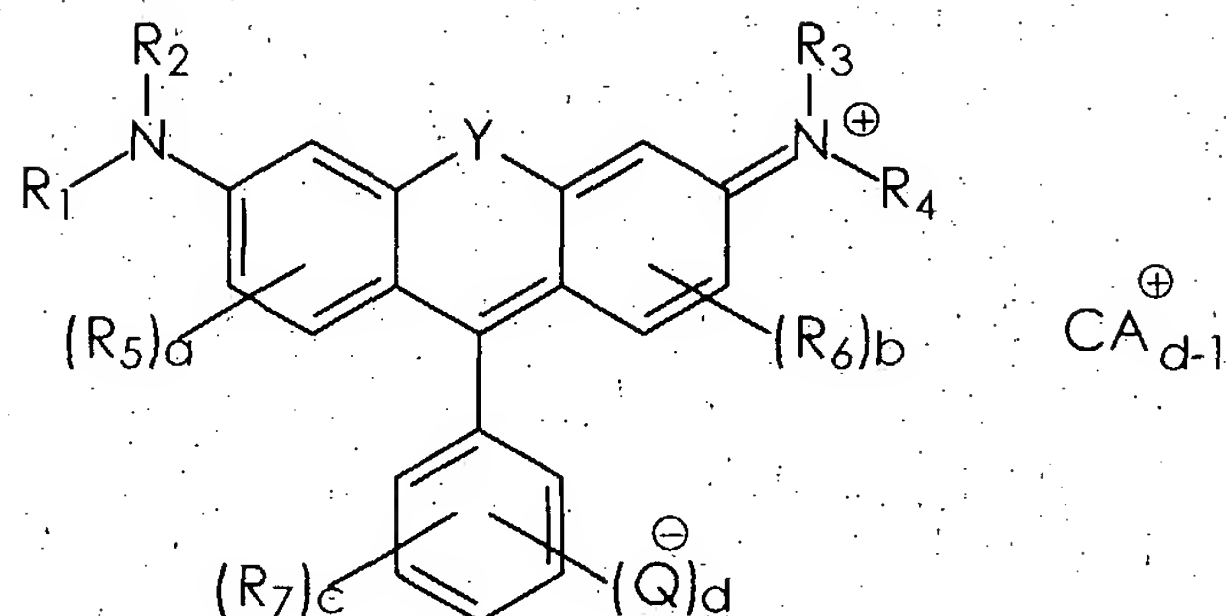
121. A phase change ink composition comprising a phase change ink carrier and a colorant compound of the formula



122. A process which comprises (1) incorporating into an ink jet printing apparatus a phase change ink composition comprising a phase change ink carrier and a colorant compound of the formula

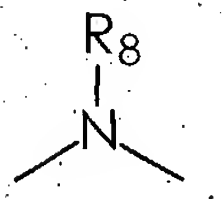
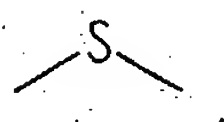
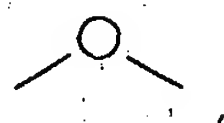


or

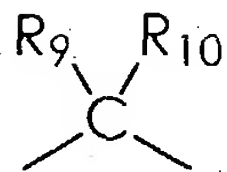


wherein R_1 , R_2 , R_3 , and R_4 each, independently of the others, is (i) a hydrogen atom, (ii) an alkyl group, (iii) an aryl group, (iv) an arylalkyl group, or (v) an alkylaryl group, wherein R_1 and R_2 can be joined together to form a ring, wherein R_3 and R_4 can be joined together to form a ring, and wherein R_1 , R_2 , R_3 , and R_4 can each be joined to a phenyl ring in the central structure, a and b each, independently of the others, is an integer which is 0, 1, 2, or 3, c is an integer which is 0, 1, 2, 3, or 4, each R_5 , R_6 , and R_7 , independently of the others, is (i) an alkyl group, (ii) an aryl group, (iii) an arylalkyl group, (iv) an alkylaryl group, (v)

a halogen atom, (vi) an ester group, (vii) an amide group, (viii) a sulfone group, (ix) an amine group or ammonium group, (x) a nitrile group, (xi) a nitro group, (xii) a hydroxy group, (xiii) a cyano group, (xiv) a pyridine or pyridinium group, (xv) an ether group, (xvi) an aldehyde group, (xvii) a ketone group, (xviii) a carbonyl group, (xix) a thiocarbonyl group, (xx) a sulfate group, (xxi) a sulfide group, (xxii) a sulfoxide group, (xxiii) a phosphine or phosphonium group, (xxiv) a phosphate group, (xxv) a mercapto group, (xxvi) a nitroso group, (xxvii) an acyl group, (xxviii) an acid anhydride group, (xxix) an azide group, (xxx) an azo group, (xxxi) a cyanato group, (xxxii) an isocyanato group, (xxxiii) a thiocyanato group, (xxxiv) an isothiocyanato group, (xxxv) a urethane group, or (xxxvi) a urea group, wherein R_5 , R_6 , and R_7 can each be joined to a phenyl ring in the central structure,

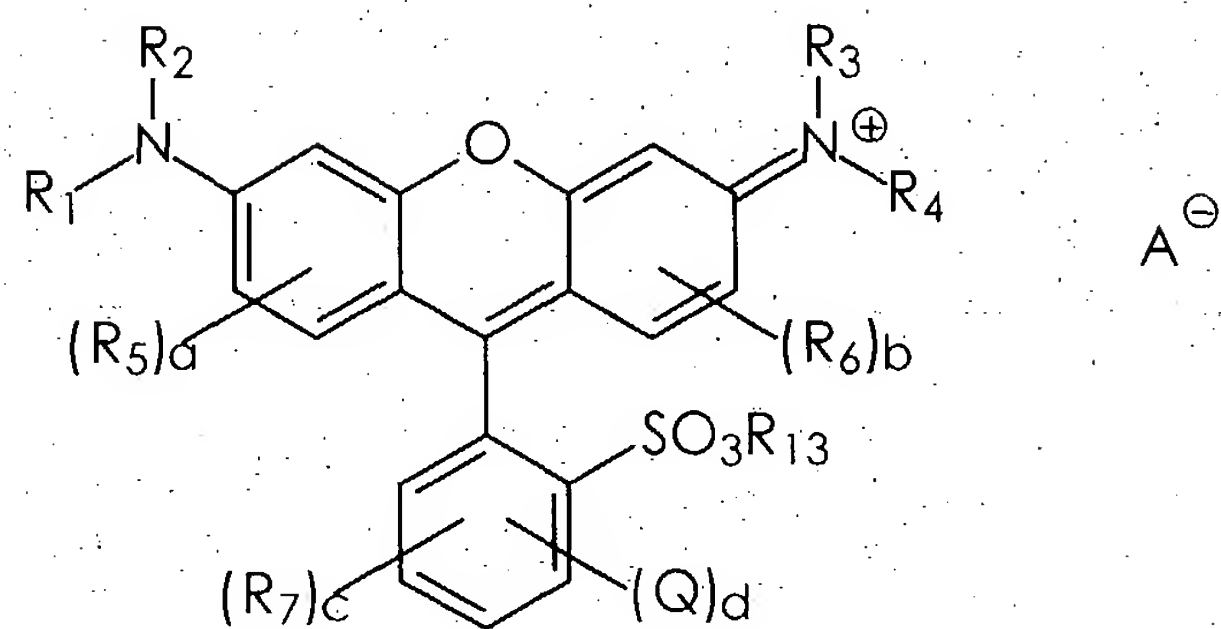
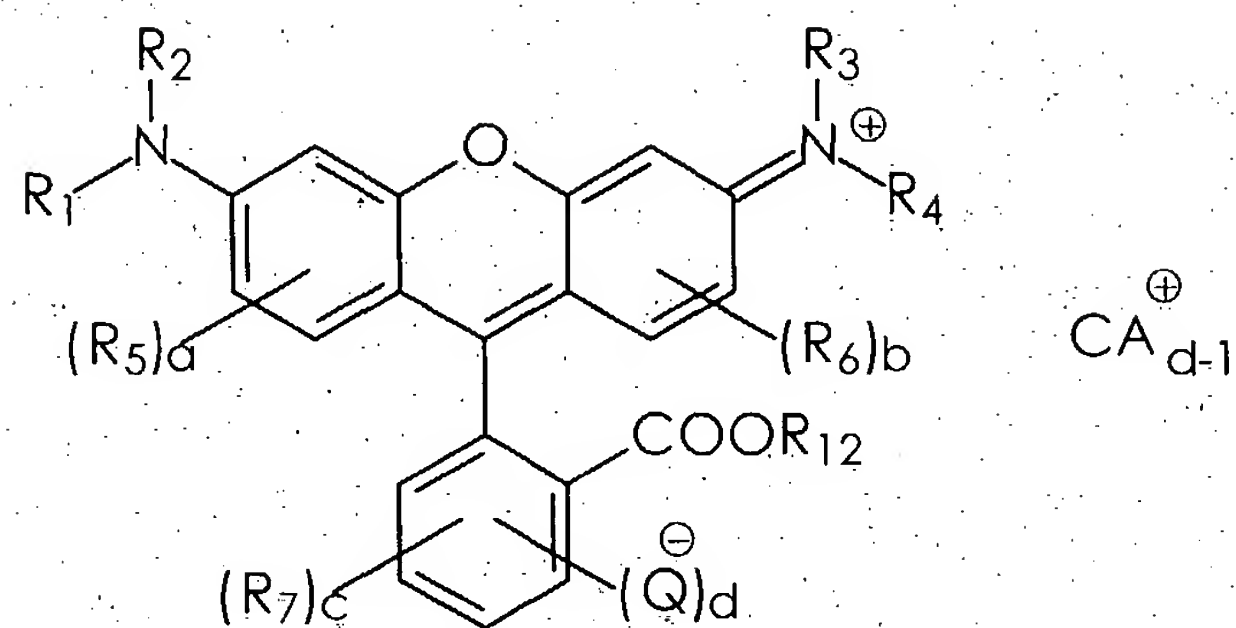
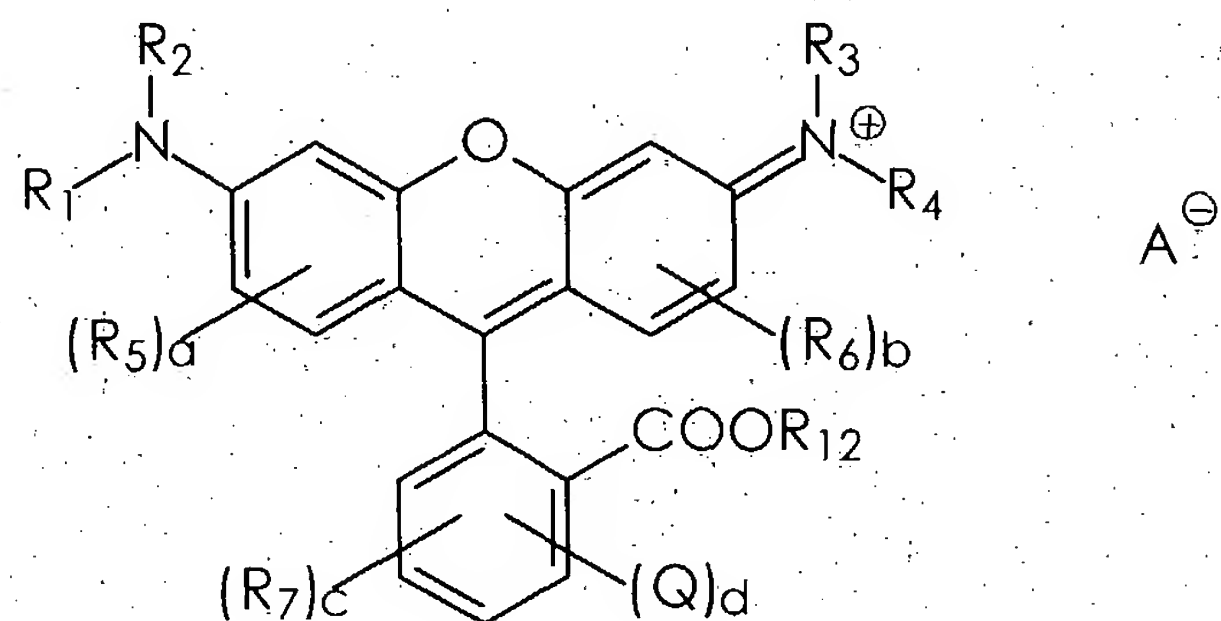


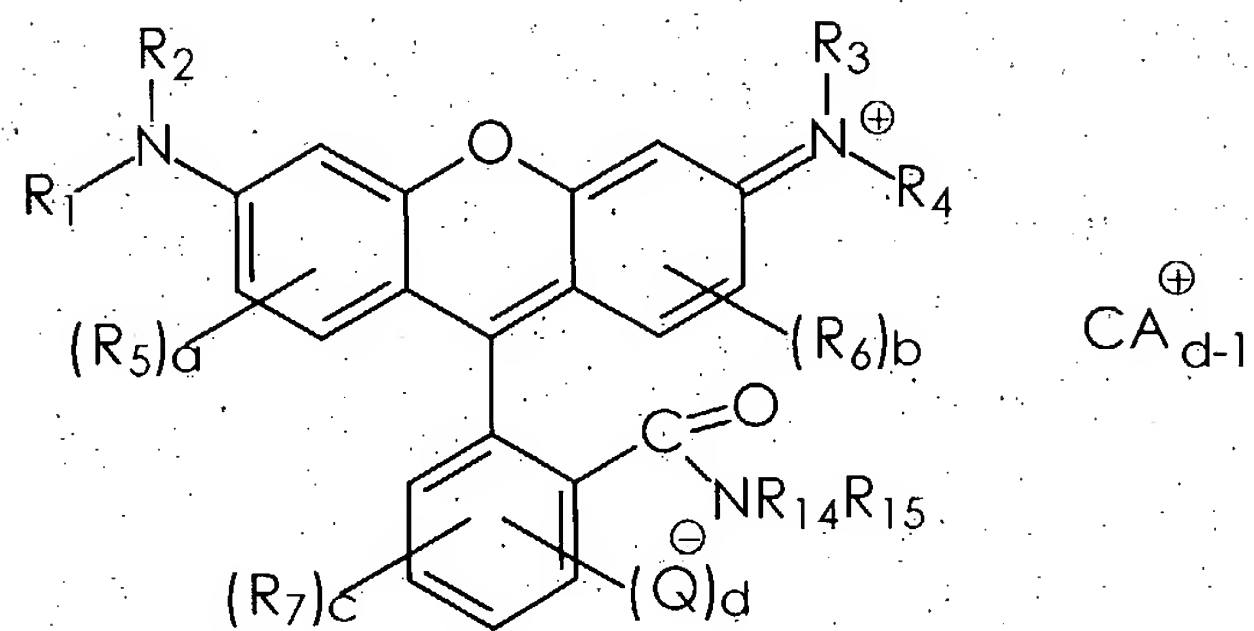
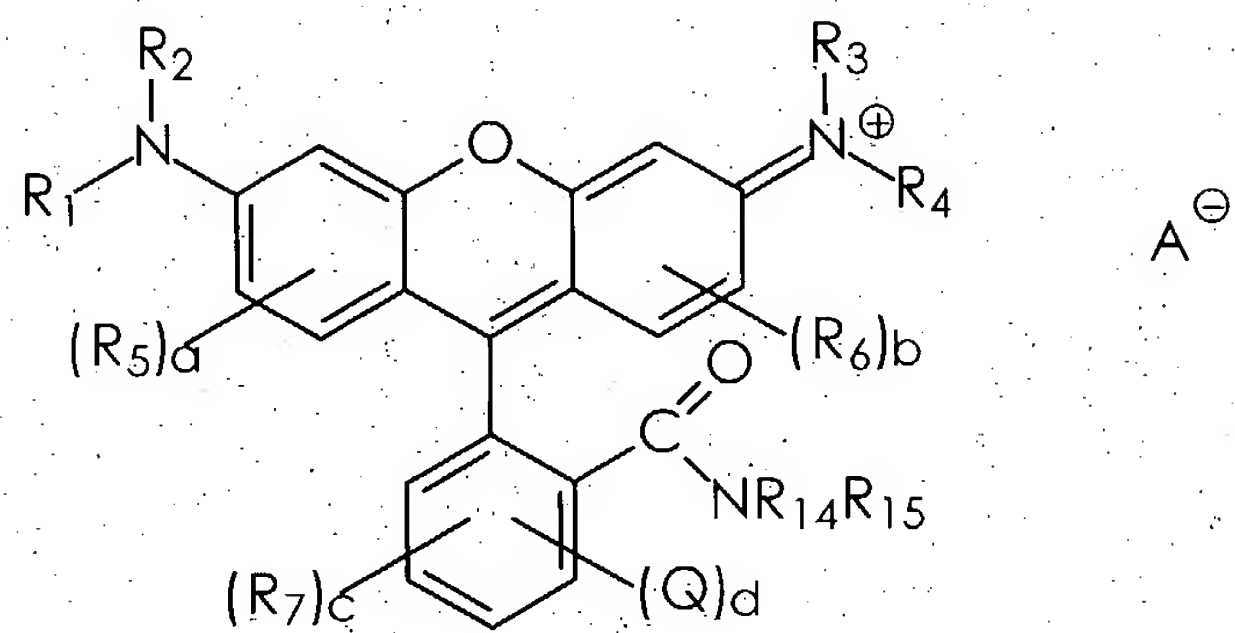
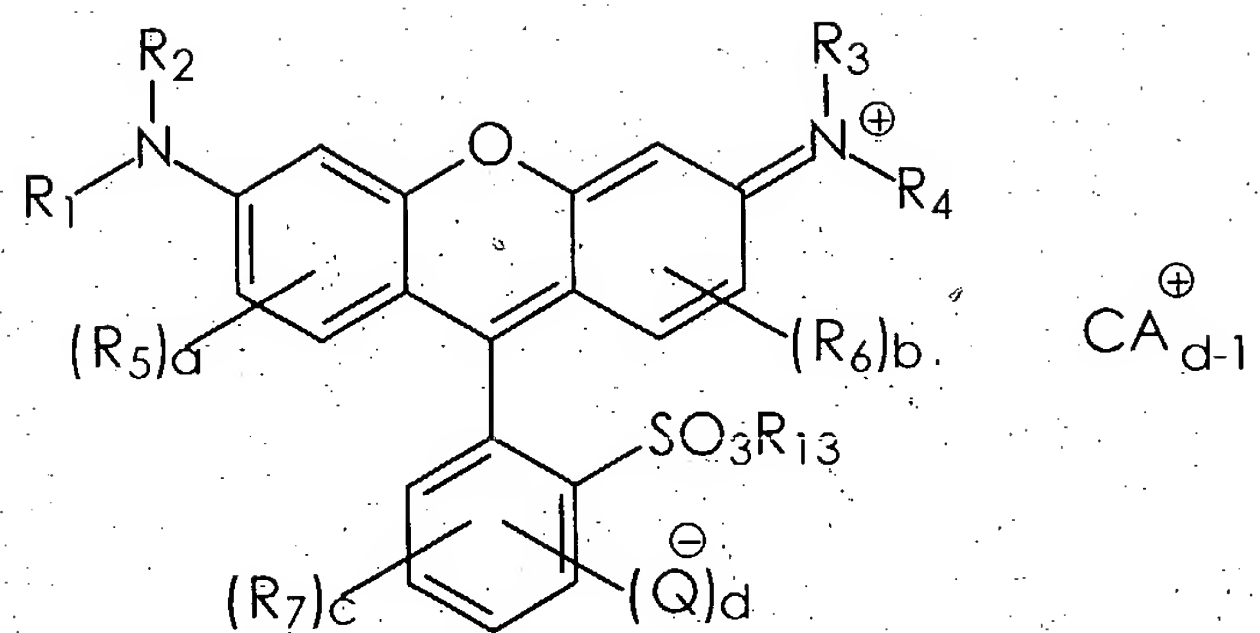
or

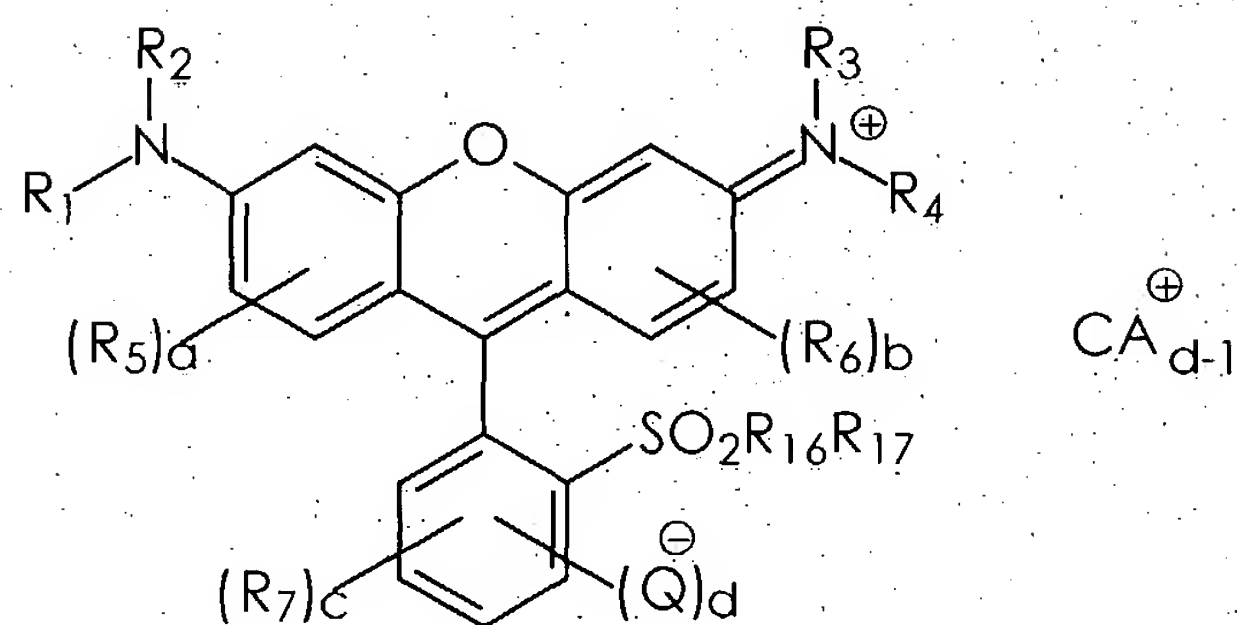
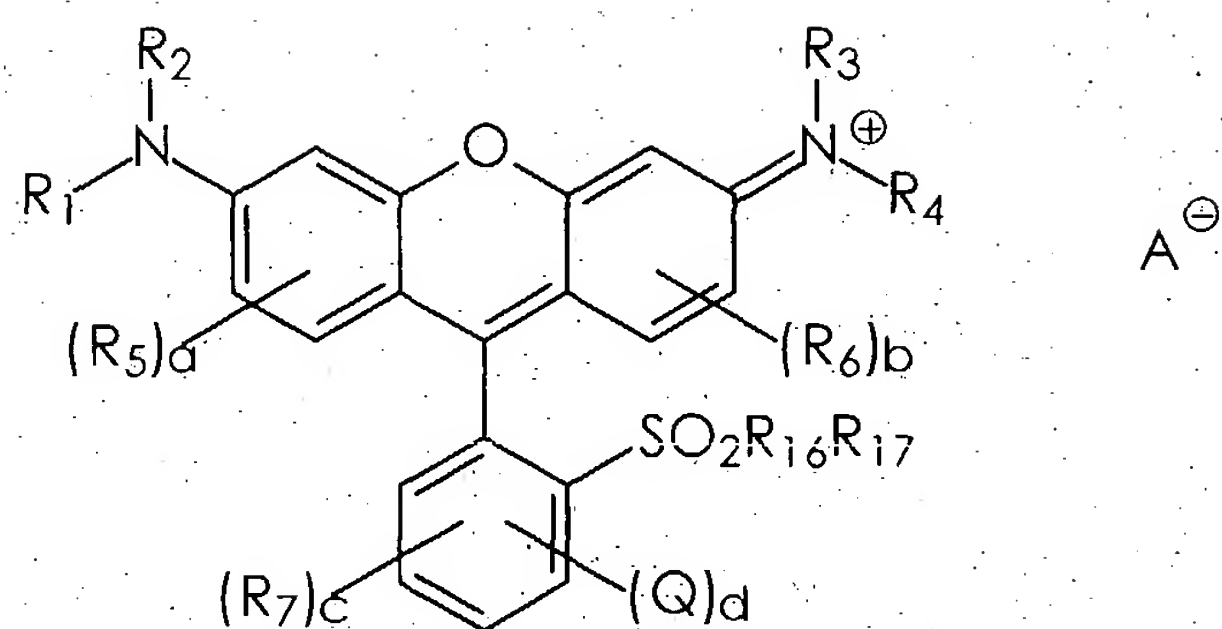


R_8 , R_9 , and R_{10} each, independently of the others, is (i) a hydrogen atom, (ii) an alkyl group, (iii) an aryl group, (iv) an arylalkyl group, or (v) an alkylaryl group, provided that the number of carbon atoms in $R_1+R_2+R_3+R_4+R_5+R_6+R_7+R_8+R_9+R_{10}$ is at least about 16, Q is a COOH

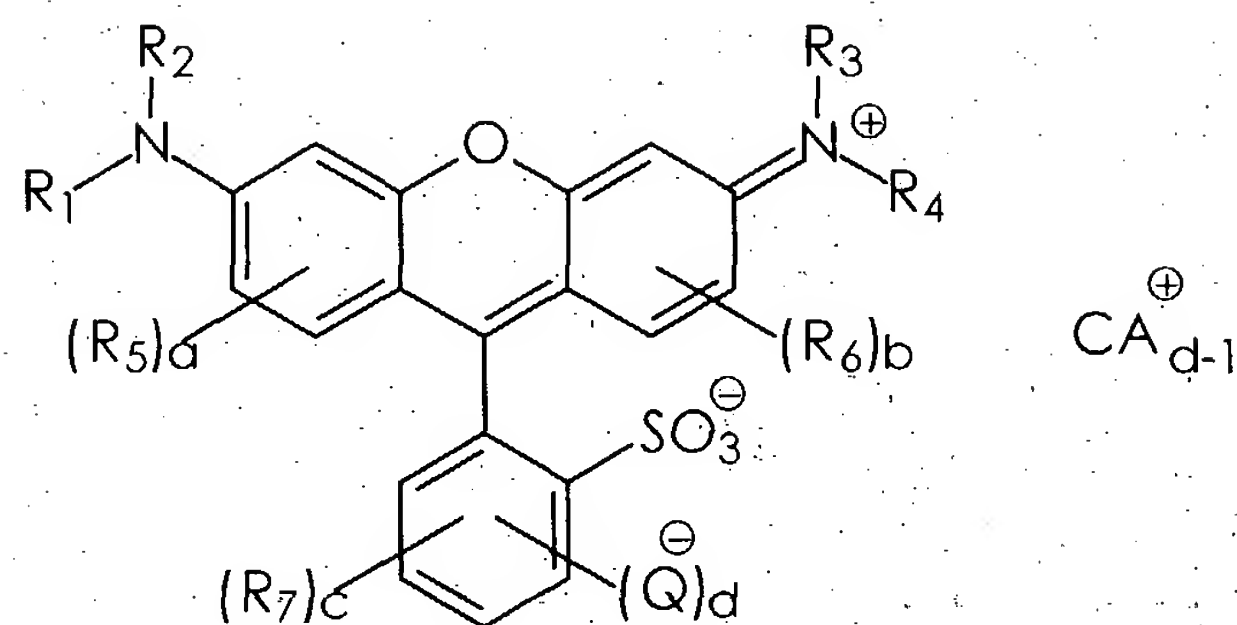
group or a SO_3H group, Q^- is a COO^- group or a SO_3^- group, d is an integer which is 1, 2, 3, 4, or 5, A is an anion, and CA is either a hydrogen atom or a cation associated with all but one of the Q^- groups, provided that when the colorant compound is of the formula







or



wherein R_{12} , R_{13} , R_{14} , R_{15} , R_{16} , and R_{17} each, independently of the other, is (i) an alkyl group, (ii) an aryl group, (iii) an arylalkyl group, or (iv) an alkylaryl group, (I) either (a) c is an integer which is 0, 1, 2, or 3, or (b) d is an integer which is 1, 2, 3, or 4, and (II) either (a) three of R_1 , R_2 , R_3 ,

and R_4 are hydrogen atoms; (b) only one of R_1 , R_2 , R_3 , and R_4 is a hydrogen atom; (c) R_1 and R_2 are both hydrogen atoms; (d) R_3 and R_4 are both hydrogen atoms; or (e) R_1 and R_3 are both hydrogen atoms and R_2 and R_4 are each, independently of the other, either alkyl groups or arylalkyl groups; (2) melting the ink; and (3) causing droplets of the melted ink to be ejected in an imagewise pattern onto a substrate.

123. A process according to claim 122 wherein the printing apparatus employs a piezoelectric printing process wherein droplets of the ink are caused to be ejected in imagewise pattern by oscillations of piezoelectric vibrating elements.

124. A process according to claim 122 wherein the substrate is a final recording sheet and droplets of the melted ink are ejected in an imagewise pattern directly onto the final recording sheet.

125. A process according to claim 122 wherein the substrate is an intermediate transfer member and droplets of the melted ink are ejected in an imagewise pattern onto the intermediate transfer member followed by transfer of the imagewise pattern from the *intermediate transfer member to a final recording sheet.*

126. A process according to claim 125 wherein the intermediate transfer member is heated to a temperature above that of the final recording sheet and below that of the melted ink in the printing apparatus.